

241300-53-T (Vol. III)

Appendix for  
P-3/UWB Flight  
Portage, Maine  
26-27 June 1995

Volume II

19990921 016



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27 Jun 1995  
Tape: E1422

Post-line Data Sheet  
Line 25  
Mission: PORTAGE MAINE, DAY

Time: 178:00:09:47  
Pass 14  
Req.# 14

#### AIRCRAFT & CHANNEL DATA

Altitude			CH 1	CH 2	CH 3	CH 4
Desired:	10000 ft	Wave/Pol.:	p-VV	p-VH	p-HV	p-HH
Baro:	9979 ft s.d.=	2 Swath Ctr Ang:	30.0°	30.0°	30.0°	30.0°
Slt. rng:	18680 ft	Tgt Dep Ang:	30.0°	30.0°	30.0°	30.0°
Look:	Right	St rng (ft):	17141	17141	17141	17141
Depr Ang:	25.0°	Near Rng Dep:	35.6°	35.6°	35.6°	35.6°
Des. trk:	126.0°	Far Rng Dep:	17.5°	17.5°	17.5°	17.5°
Start Sq:	90.0°	Atten (dB):	52.0	54.0	53.0	63.0
End Sq:	90.0°	RMS Video (%FS)	26.2	15.5	16.9	34.2

#### WAYPOINTS

	Latitude	Longitude
Line up:	N 46:56.83	W 68:48.36
Start:	N 46:49.80	W 68:34.19
End:	N 46:43.93	W 68:22.42
From:	N 54:27.42	W 91:52.73
To:	N 35:38.07	W 51:55.62

Main Target: GP  
Mocomp Point:  
Lat: N 46:44.73  
Long: W 68:30.56  
Tgt Trk: 0.0 Tgt Vel: 0.0  
Alt: 660.0 ft

#### RADAR PARAMETERS - for UWB

RTP Channel: 1  
Resolution: N/A  
Swath width: Single  
RMS Time Constant: 2^7  
Position Reference: ON  
Atten. Tracking: OFF  
Range Gate Delta: 0.0 ft  
Azimuth Presum Rate: Presum6  
TX Chirp Filename: CTL1U2B

Filter damping is Hi -> 10 sec  
PRF Factor is FAST (262.5 kts) -  
Ave Gndspd: Real -> 253.8 kts  
Mocomp Off for Chnl 1, 2, 3, 4  
GPS Vel/Pos Reference  
Adj Gnd Scene: 5000.0 ft  
Range Tracking is OFF  
Clutterlock Reference: OFF  
RX Chirp Filename: CRL1N0A

Ave Ref Vel -> -.6 fps (s.d.= 1.5)  
Ave Fil Vel -> .8 fps (s.d.= 1.5)

NML XMIT PWR  
X: -70.0  
L: -70.0  
C: -70.0  
P: 46.8

ANT BIAS  
Elevation: 0.0°  
Azimuth: 0.0°  
Pitch: 0.0°

Tape Footage Drive no.  
Starting: 5537 ft (2)  
Ending: 6766 ft (2)

Vel Bias CAL Atten  
X: 1035.0 X: 63.8 dB  
Y: -433.0 L: 63.8 dB  
Z: 6697.0 C: 63.8 dB

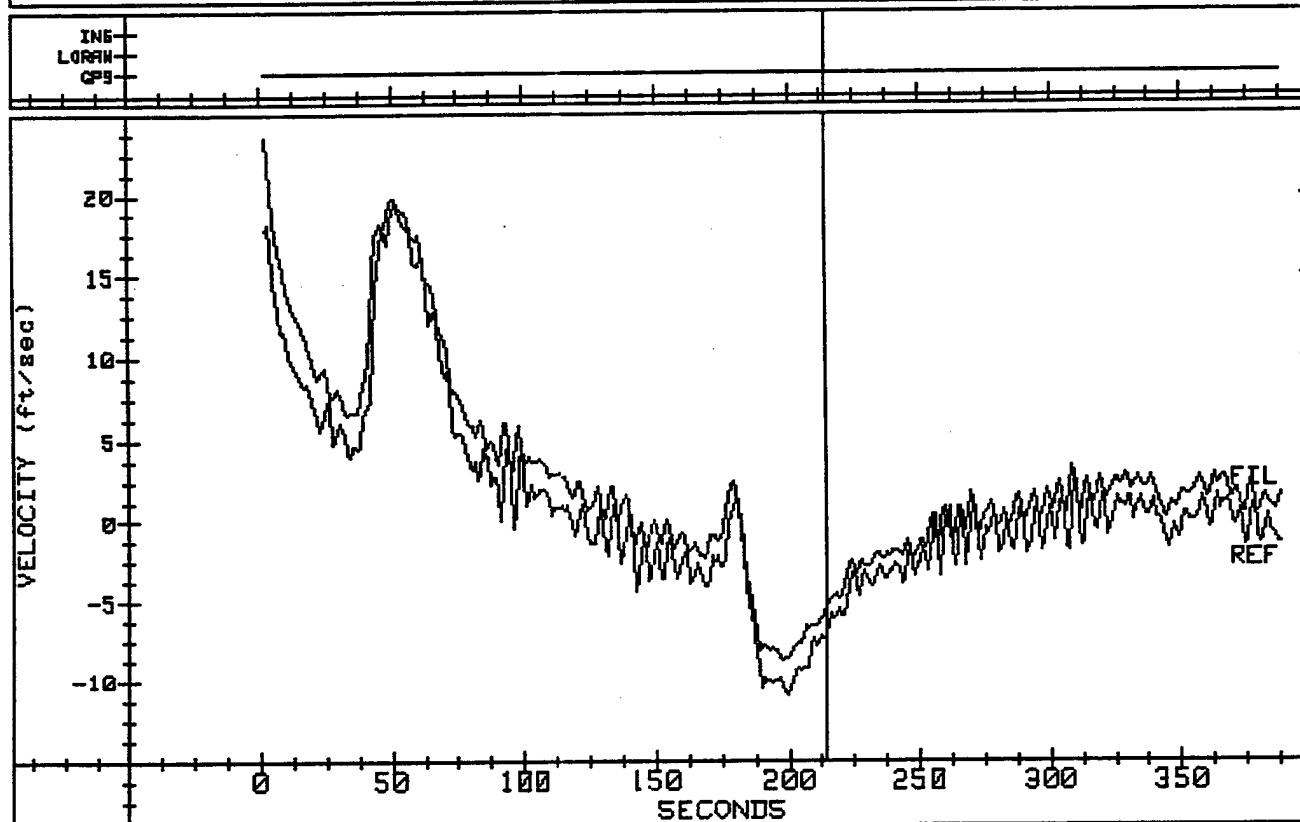
LINE Map Time (UCT)  
Start: 00:09:47  
End: 00:12:26

#### Mocomp Counters

Start: 844534 000CE2F6h  
End: 871201 000D4B21h

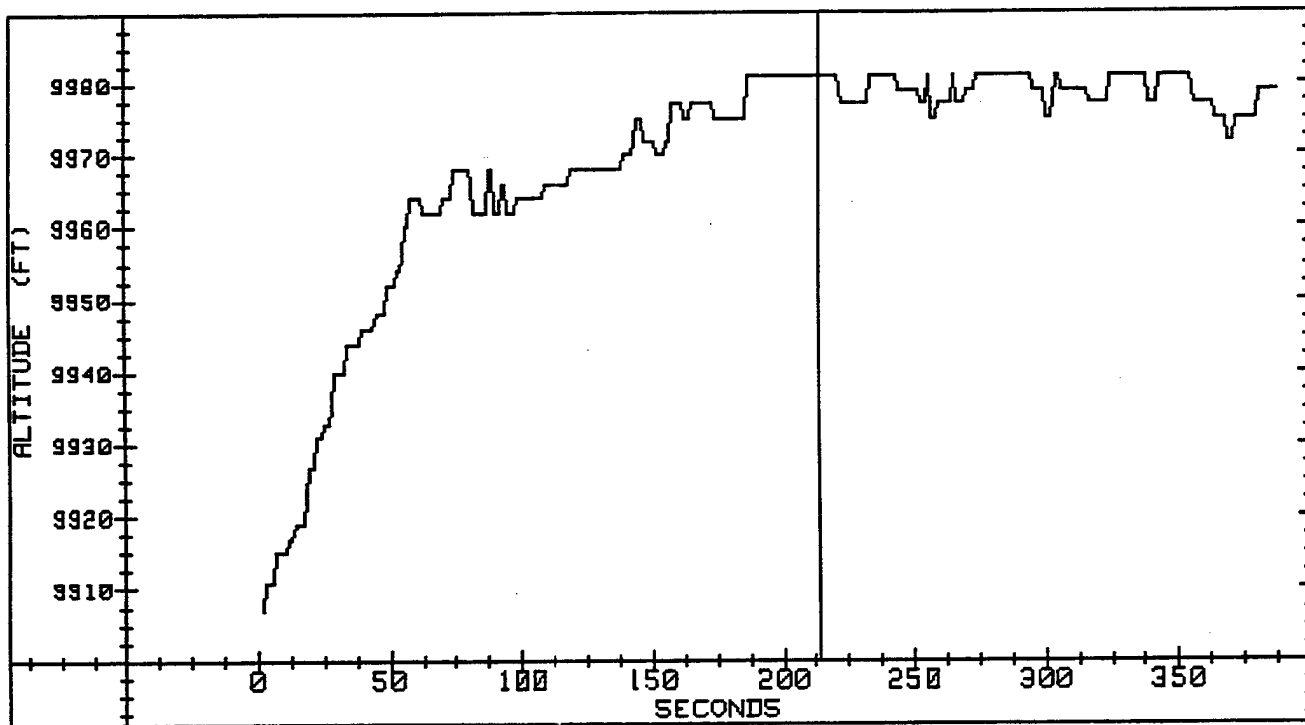
CPA (UCT): 00:00:00  
Alt: 0 ft (GPS)  
Lat: N 0:00: 0  
Lon: E 0:00: 0

FILTERED vs. REF. VELOCITY  
DAY 170 TIME 0:6 PASS 14



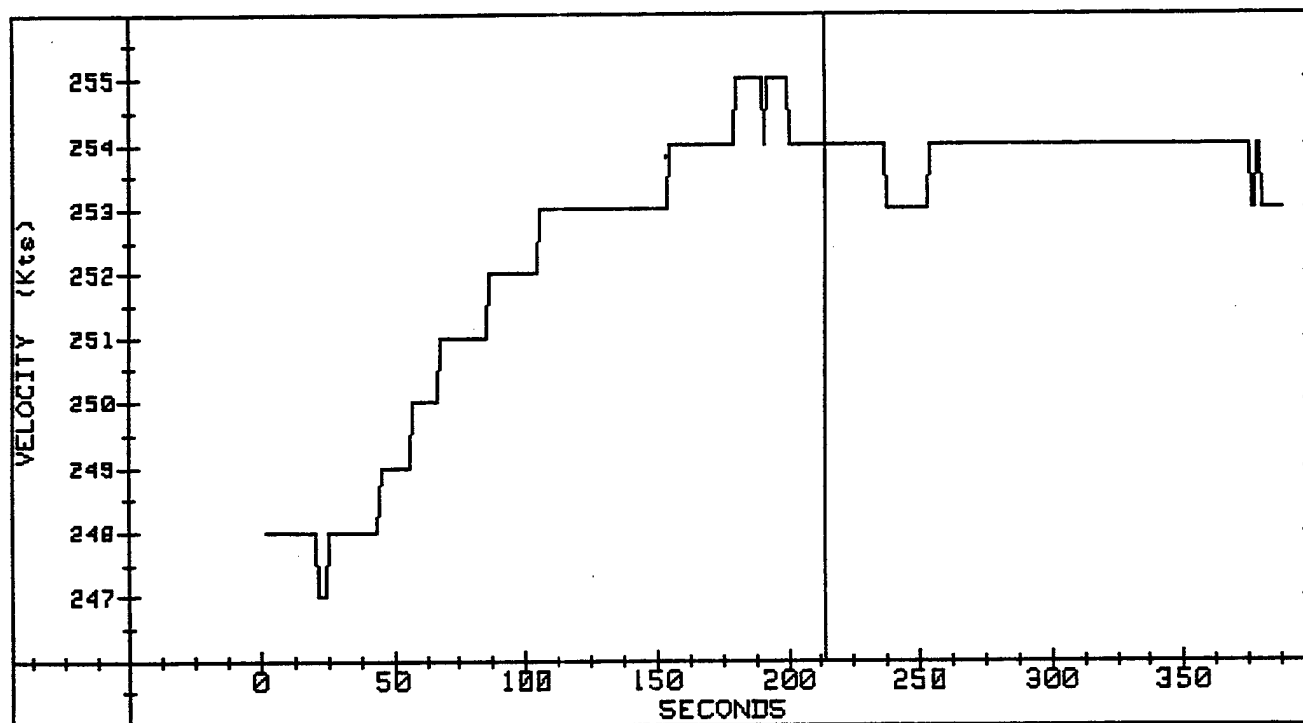
BARO ALTITUDE

DAY 17B TIME 0:6 PASS 14 m= 9979. sd= 2.30759



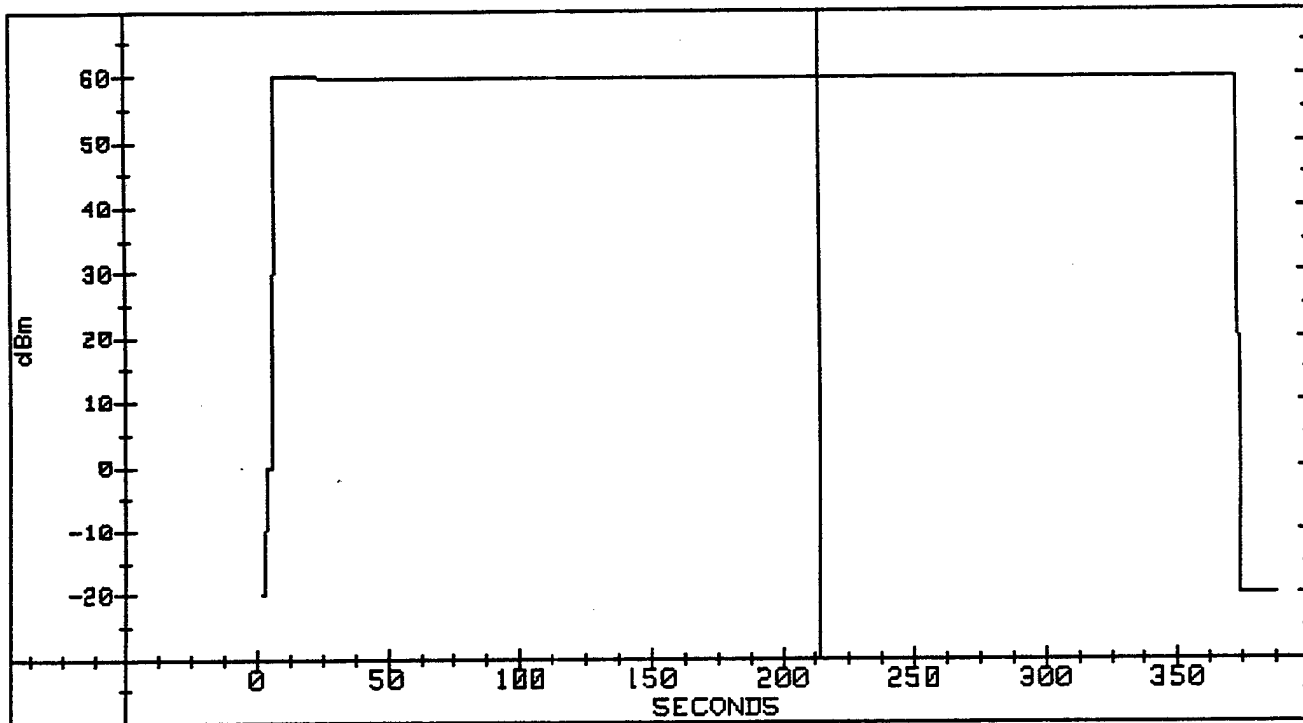
# INS GROUND SPEED

DAY 170 TIME 0:6 PASS 14 m= 253.0, sd= .374531



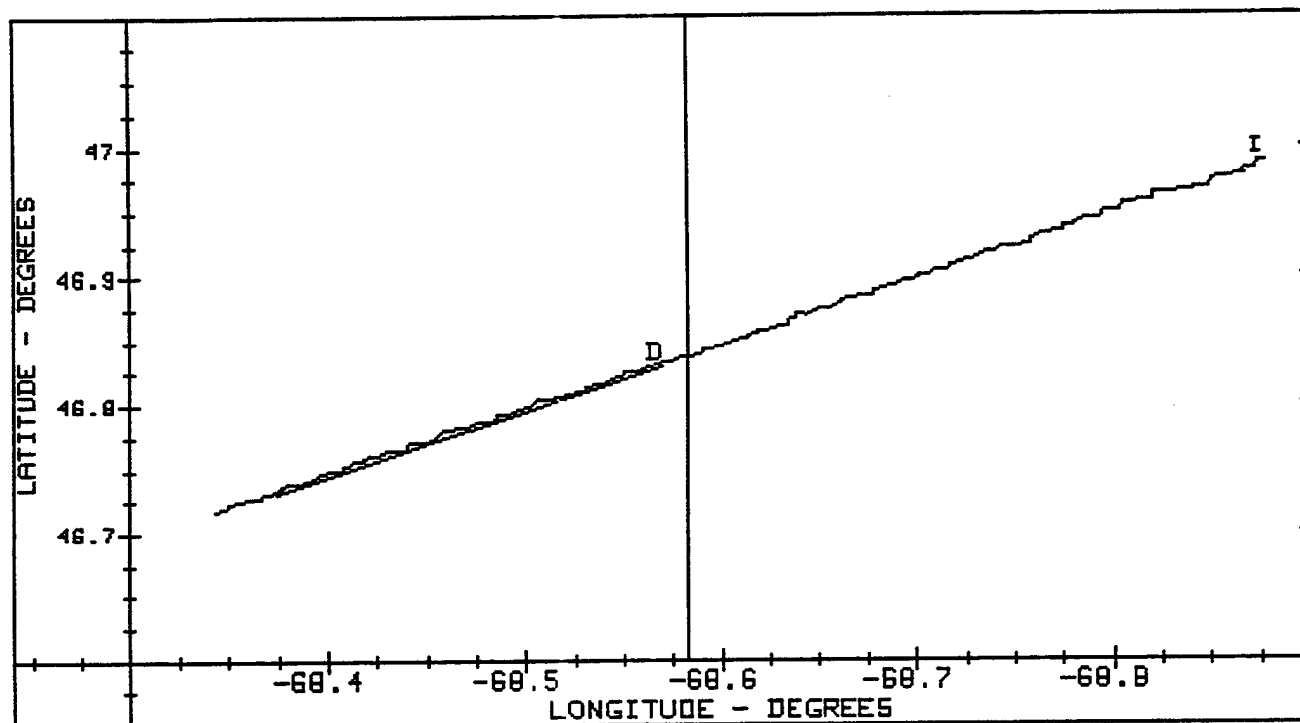
P Band Power

DAY 170 TIME 0:6 PASS 14 m= 52.64, sd= 22.4936



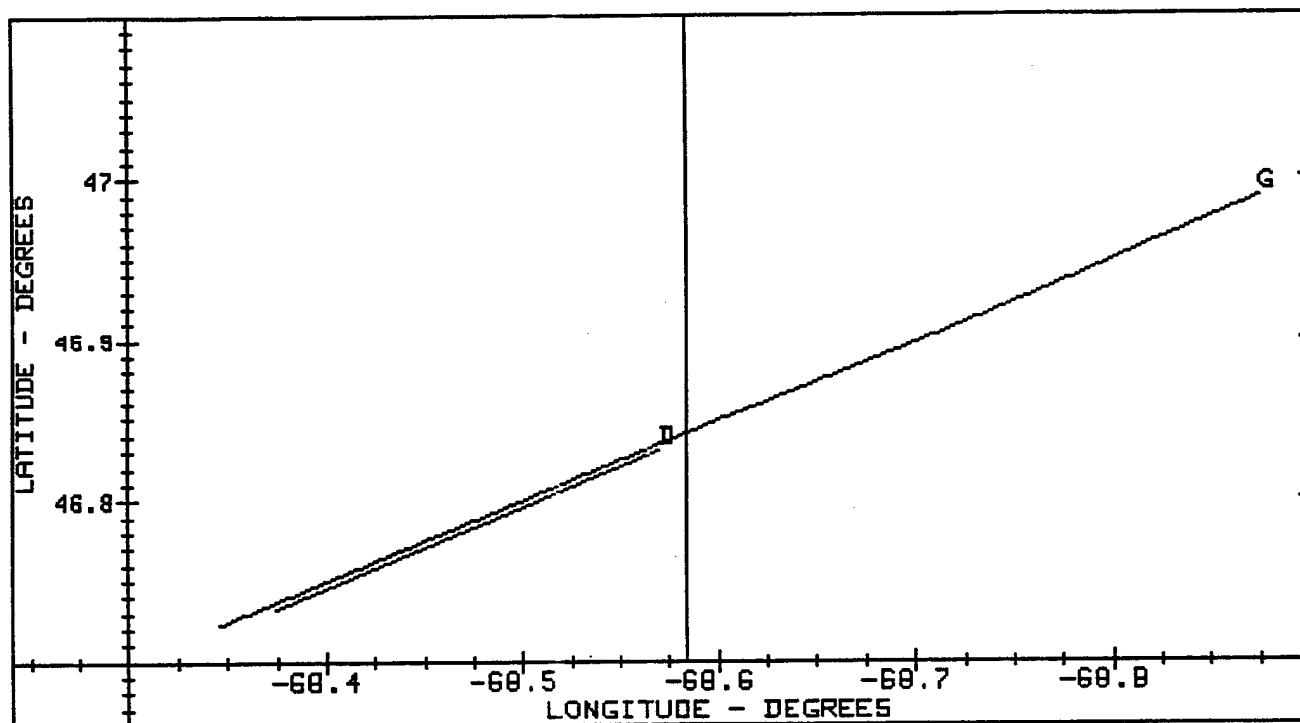
INS AIRCRAFT POSITION

DAY 178 TIME 0:6 PASS 14



GPS AIRCRAFT POSITION

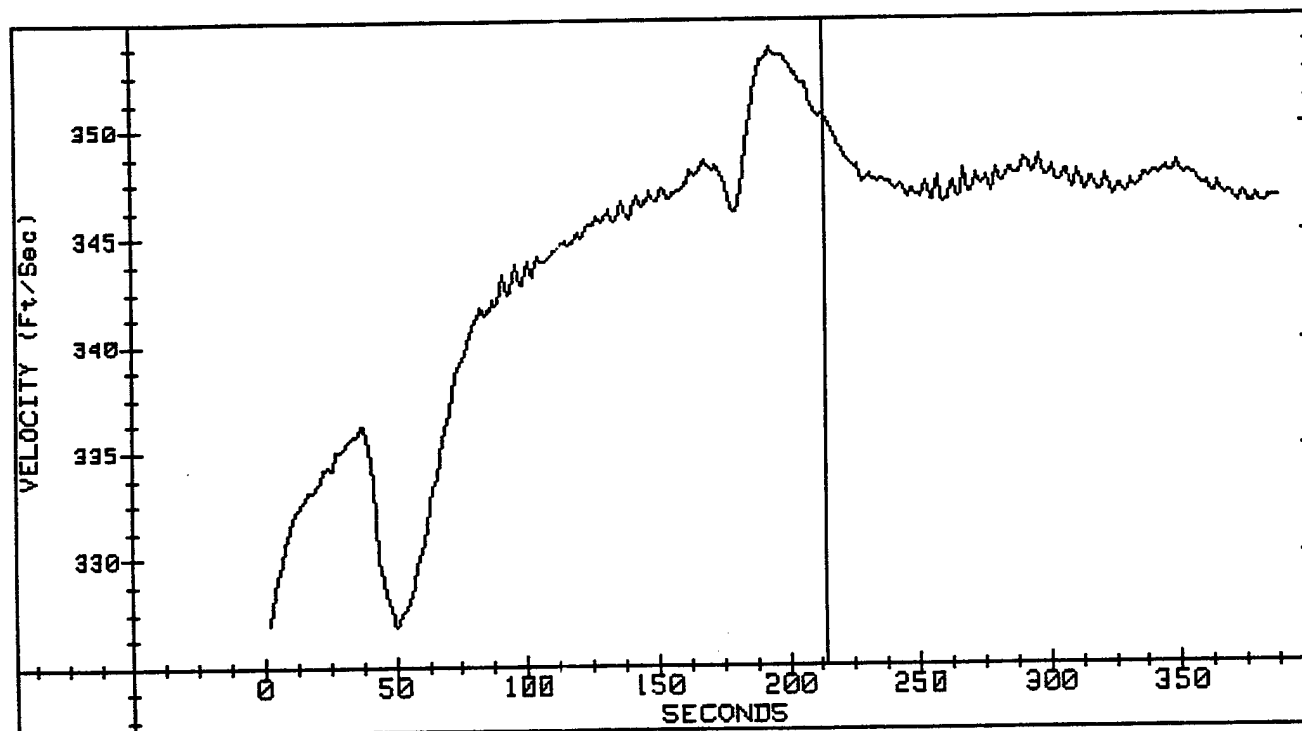
DAY 178 TIME 0:6 PASS 14





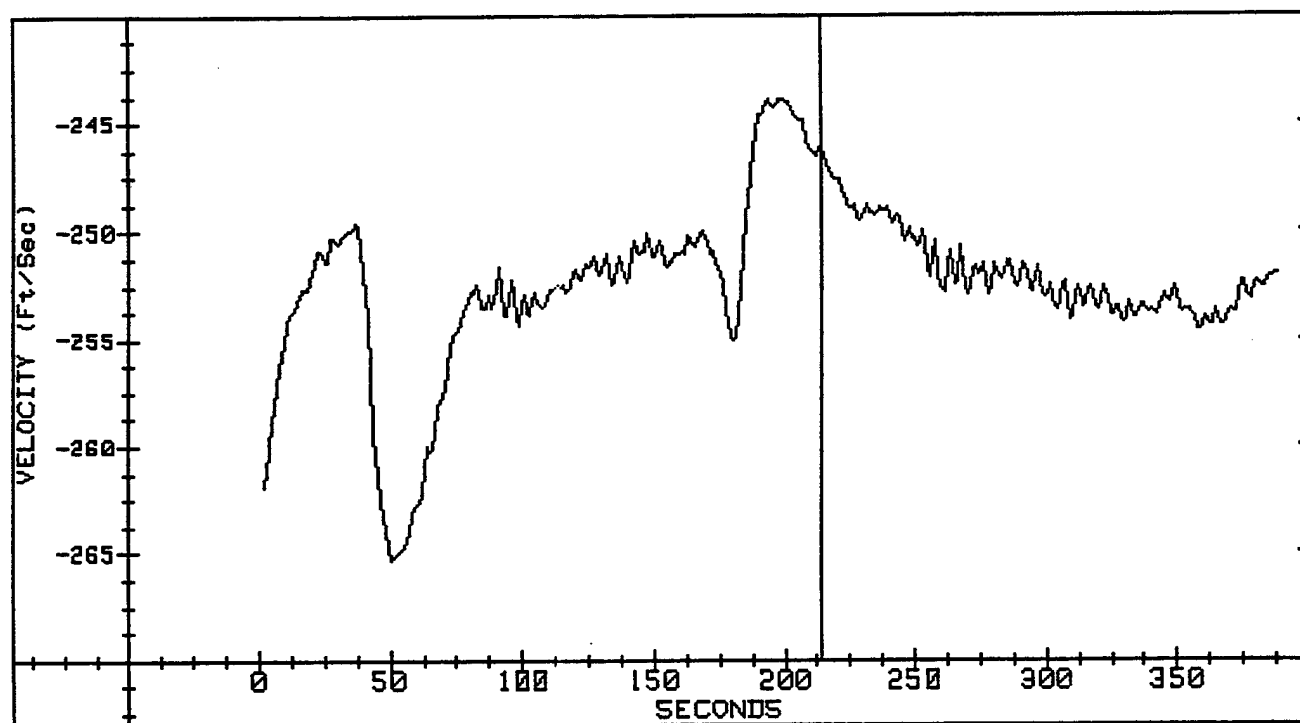
GPS V<sub>e</sub>

DAY 170 TIME 0:6 PASS 14 m= 347.3, sd= .491663



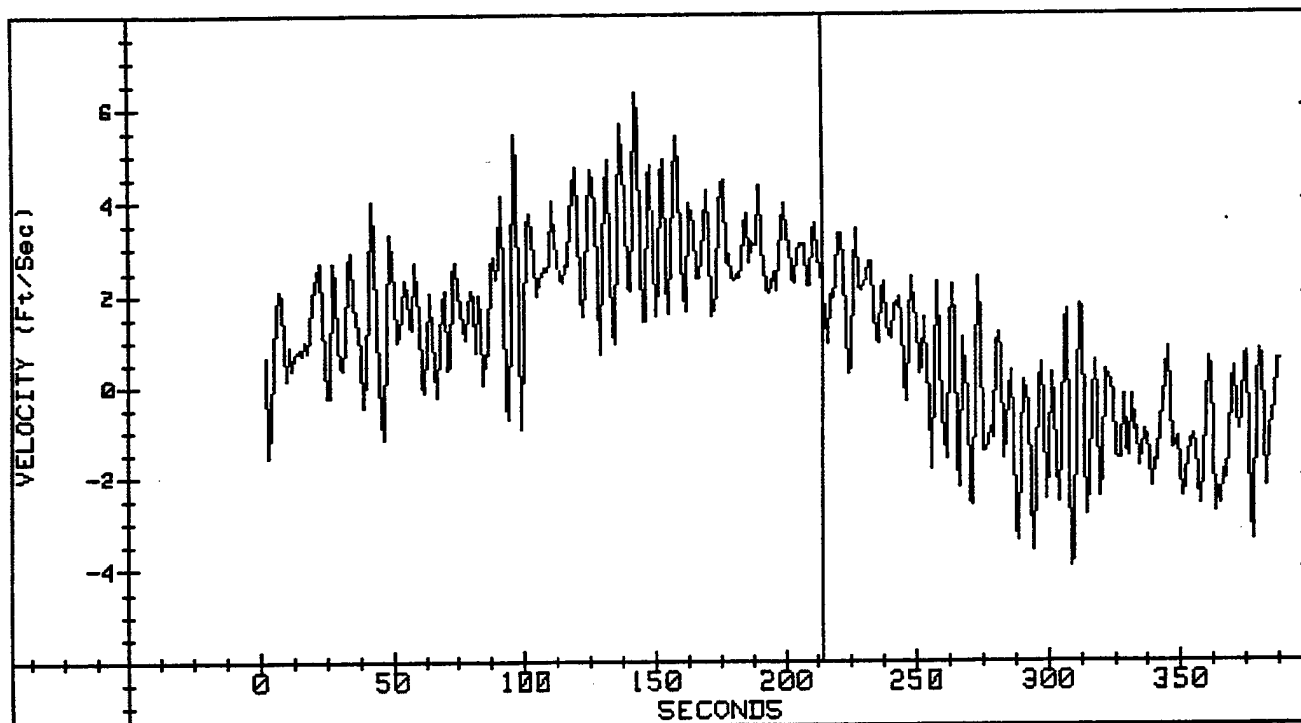
GPS Vn

DAY 178 TIME 0:6 PASS 14 m= -252.3, sd= 1.50213



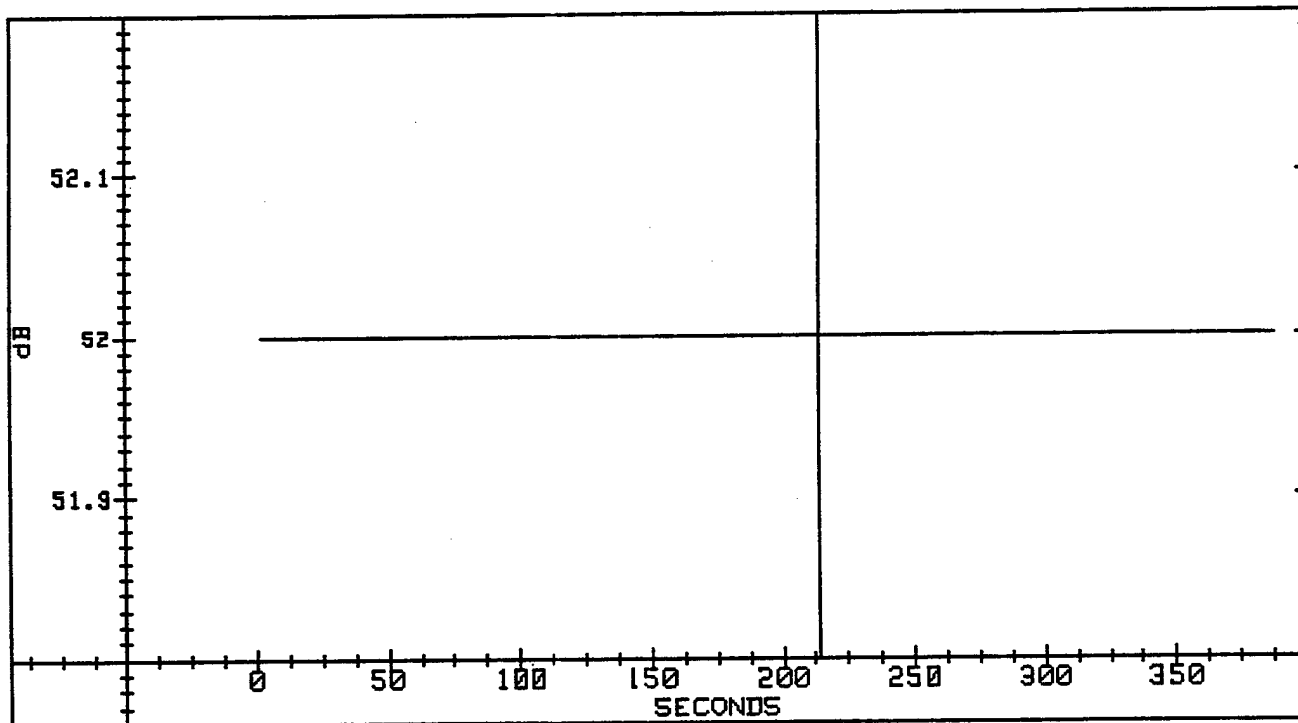
GPS Vv

DRY 178 TIME 0:6 PASS 14 m= -.4736, sd= 1.52996



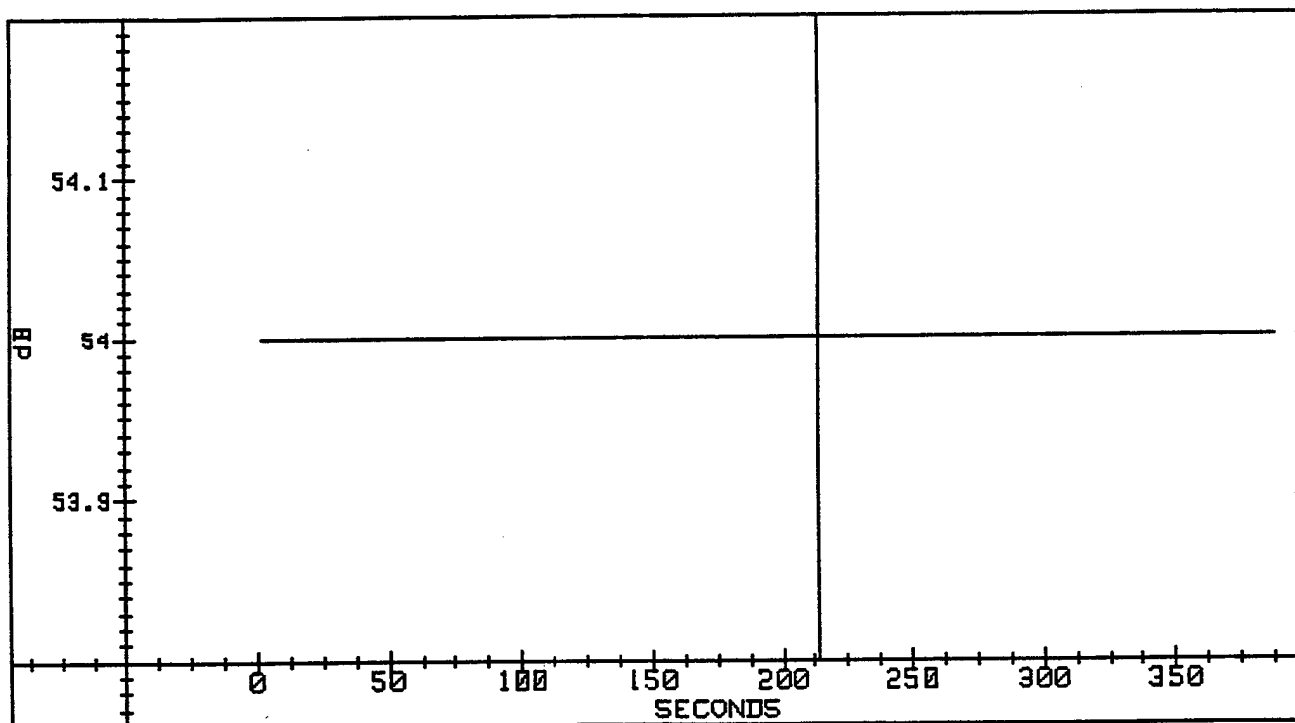
Ch1 RES Attenuation

DAY 178 TIME 0:6 PASS 14 m= 52. sd= 0



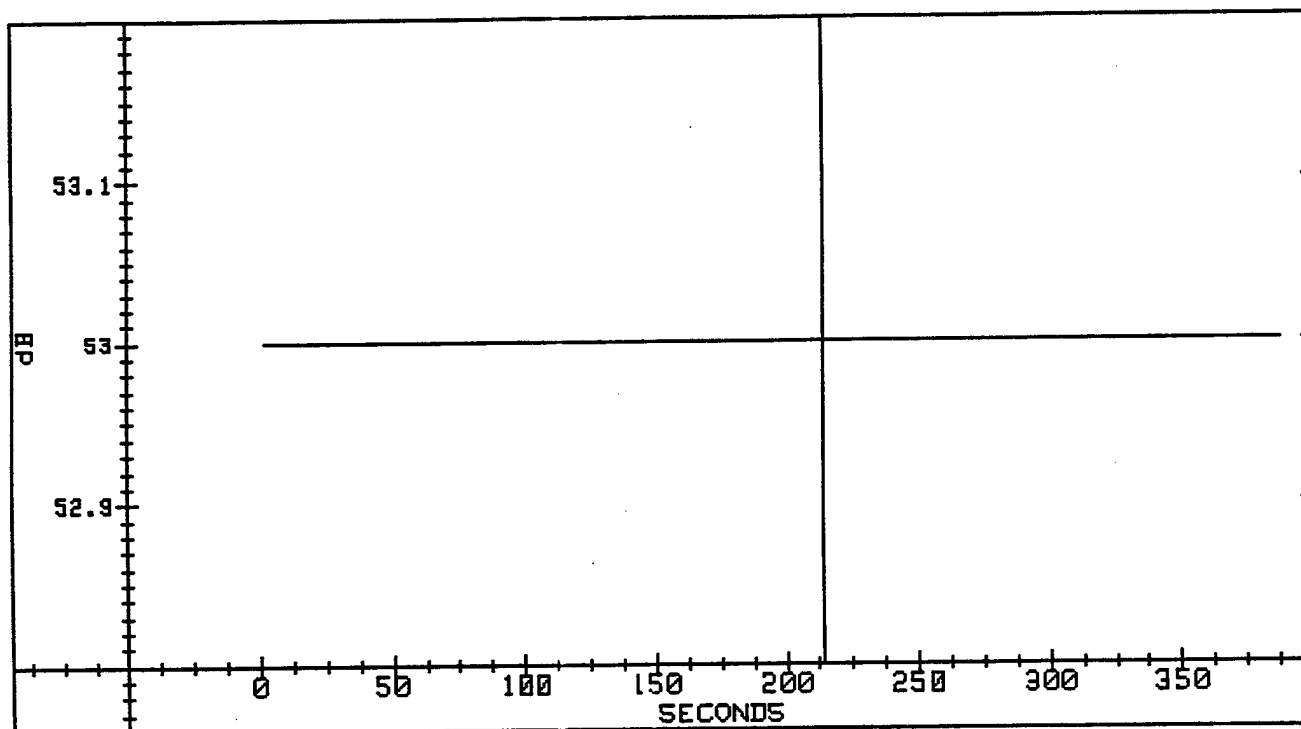
Ch2 RES Attenuation

DAY 178 TIME 0:6 PASS 14 m= 54, sd= 0



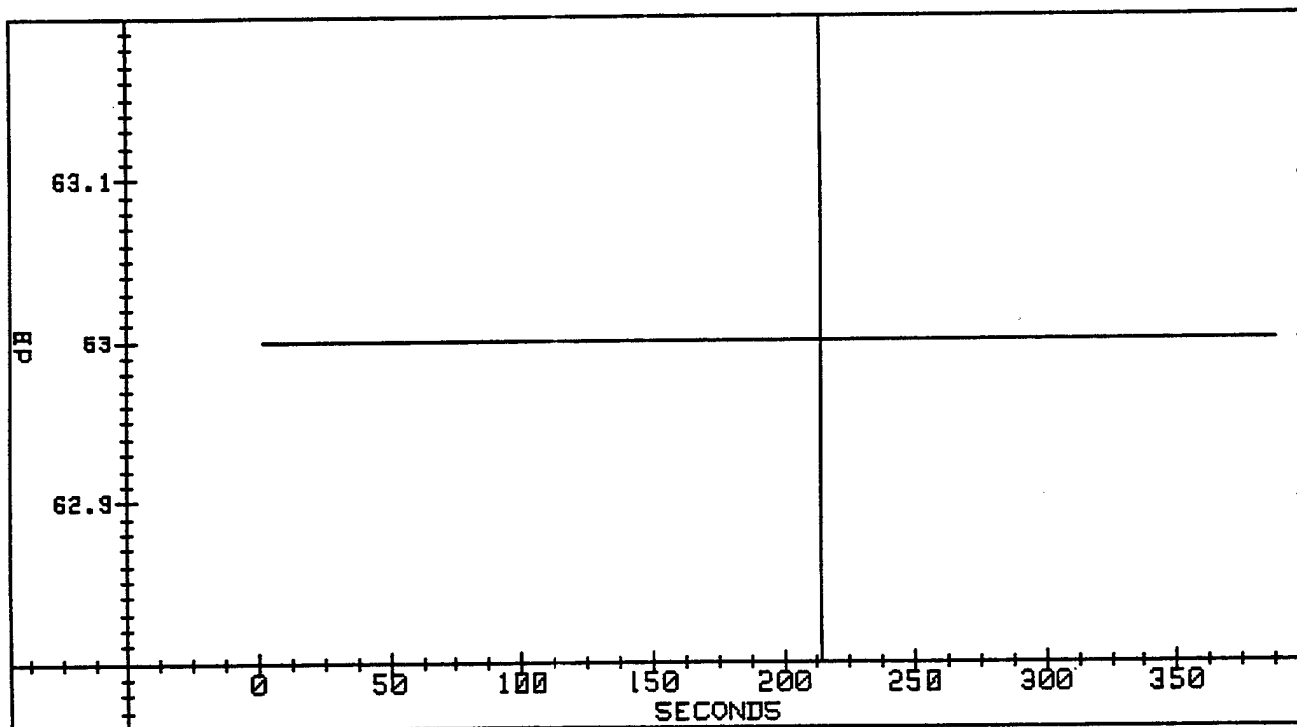
Ch3 RES Attenuation

DAY 178 TIME 0:6 PASS 14 m= 53, sd= 0



Ch4 RES Attenuation

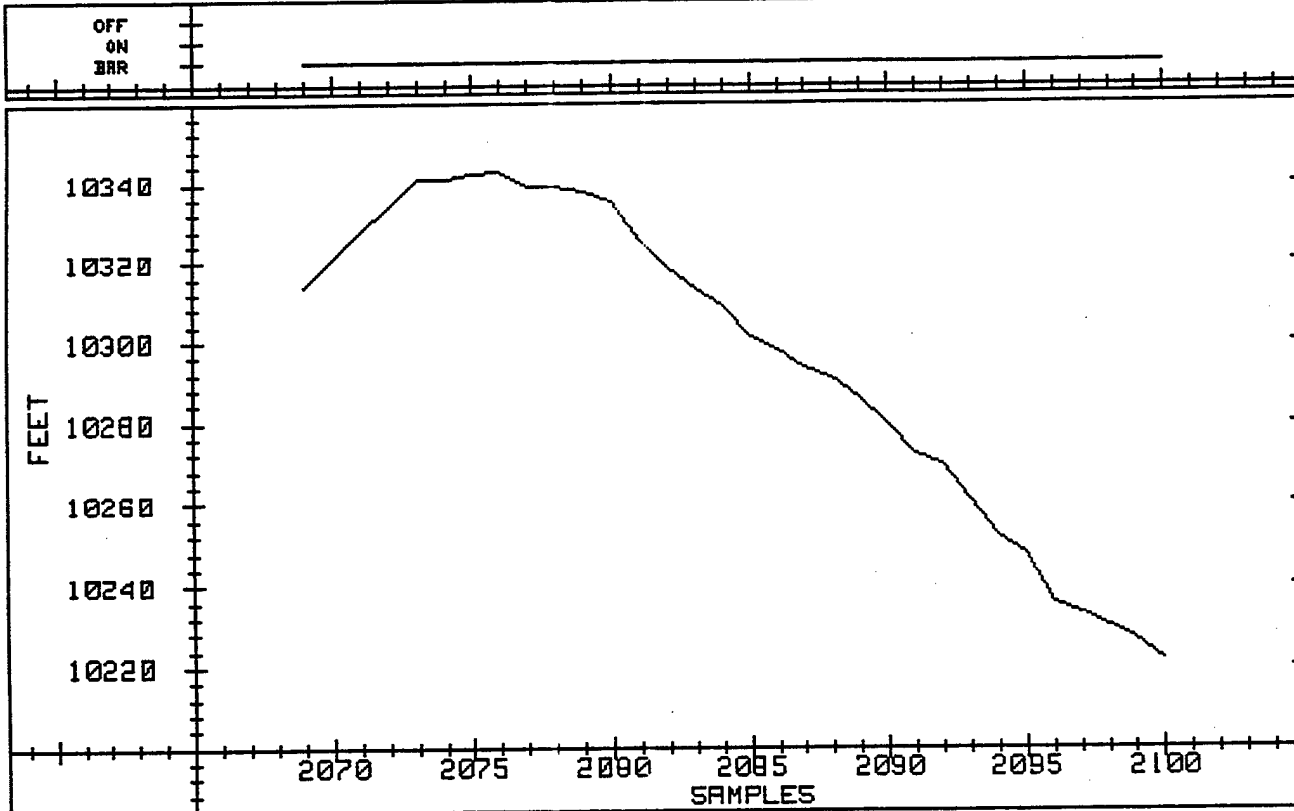
DAY 178 TIME 0:6 PASS 14 m= 63, sd= 0



GPS ALTITUDE

MEAN= 10296.3 STANDARD DEVIATION= 39.4685

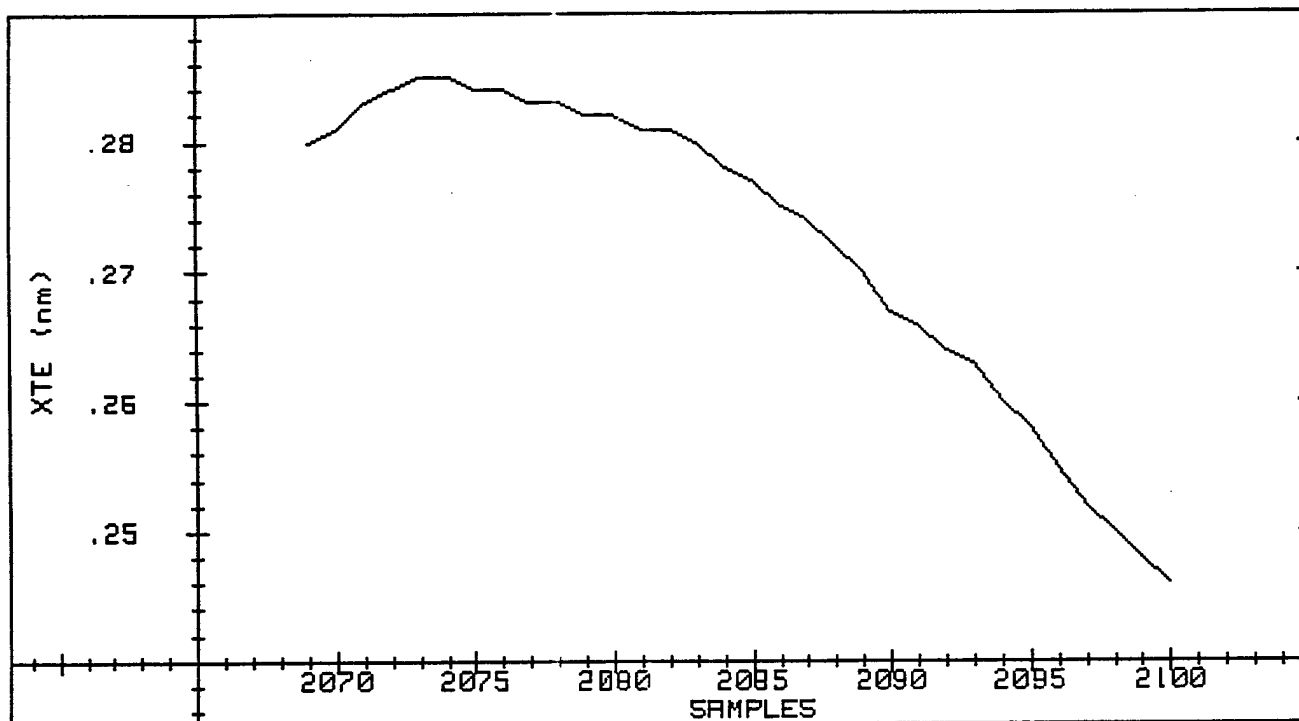
DATE: June 26, 1995 PASS 14



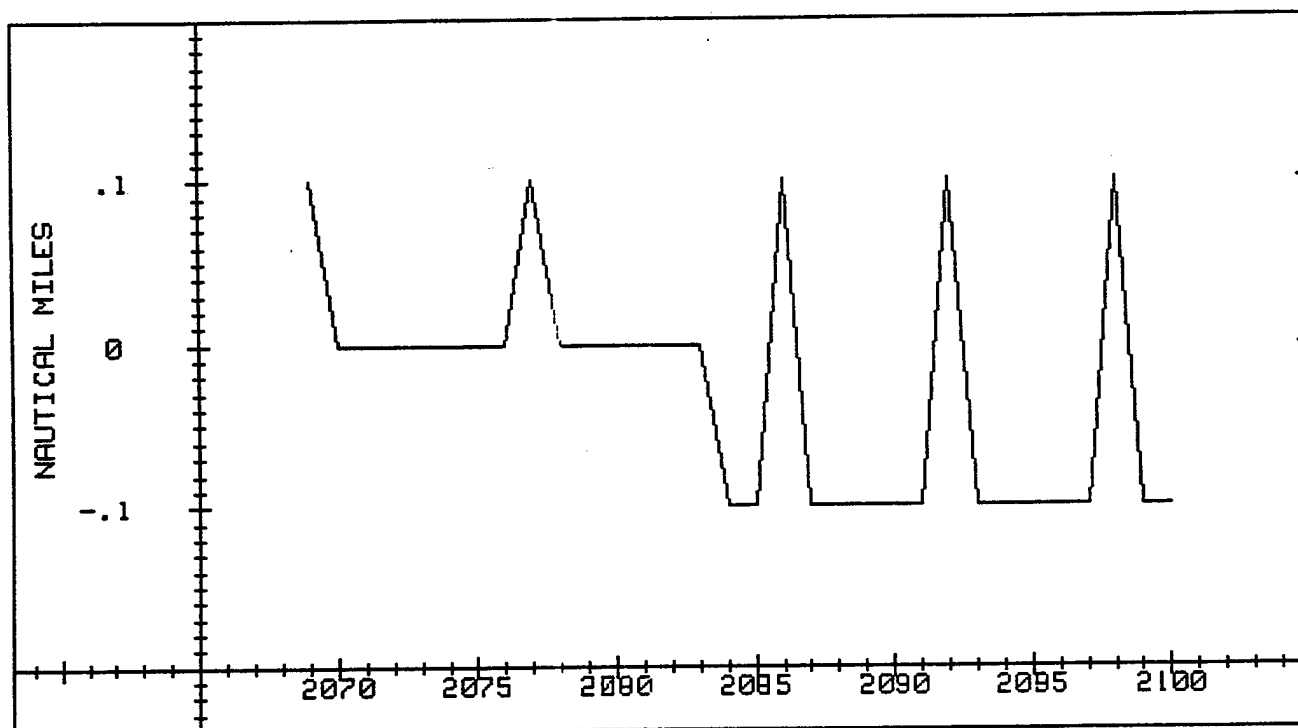


GPS Cross Track Error

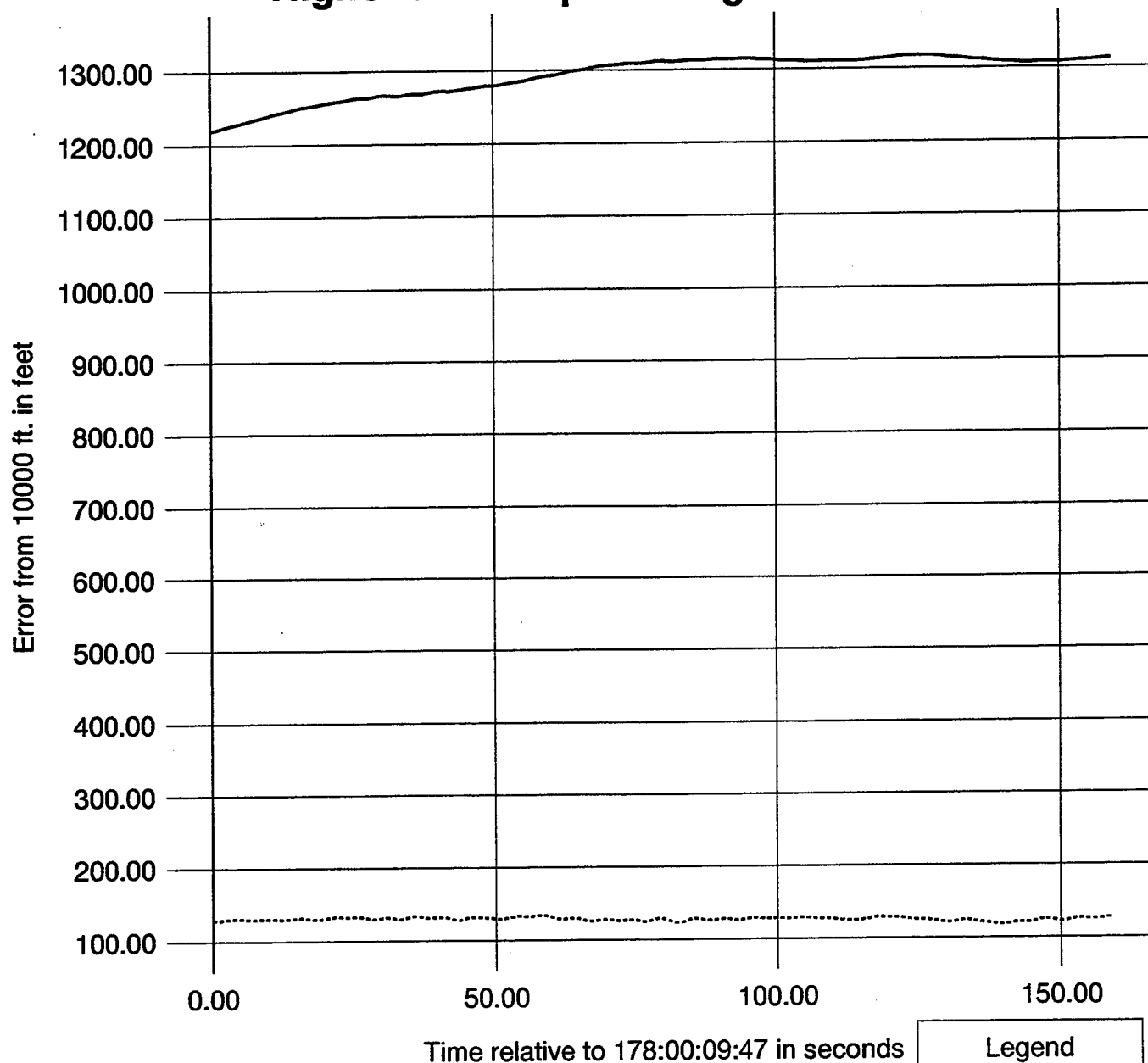
MEAN= .272281      STANDARD DEVIATION= .0121841  
DATE: June 26, 1995      PASS 14



INS CROSS TRACK ERROR  
MEAN= -.026125    STANDARD DEVIATION= .071739  
DATE: June 26, 1995    PASS 14



# **Portage, ME - June 26, 1995 - Pass 14 - Xtk. and Alt. Errors** **Higher alt. and port are greater than zero**



	Mean	St. Dev.
ALT.	127.82	3.49
XTK.	1291.49	26.63

Legend	
—	P5-xt
.....	P5-alt

27 Jun 1995  
Tape: E1422

Post-line Data Sheet  
Line 27  
Mission: PORTAGE MAINE, DAY

Time: 178:00:22:27  
Pass 15  
Req.# 15

#### AIRCRAFT & CHANNEL DATA

Altitude			CH 1	CH 2	CH 3	CH 4
Desired:	10000 ft	Wave/Pol.:	p-VV	p-VH	p-HV	p-HH
Baro:	9989 ft s.d.=	3 Swath Ctr Ang:	30.0°	30.0°	30.0°	30.0°
Slt. rng:	18680 ft	Tgt Dep Ang:	30.0°	30.0°	30.0°	30.0°
Look:	Right	St rng (ft):	17141	17141	17141	17141
Depr Ang:	25.0°	Near Rng Dep:	35.6°	35.6°	35.6°	35.6°
Des. trk:	336.0°	Far Rng Dep:	17.5°	17.5°	17.5°	17.5°
Start Sq:	90.0°	Atten (dB):	52.0	54.0	53.0	63.0
End Sq:	90.0°	RMS Video (%FS)	27.1	9.9	19.0	23.2

#### WAYPOINTS

Line_up:	N 46:28.11	W 68:24.09	Main Target:	GP
Start:	N 46:39.08	W 68:31.14	Mocomp Point:	
End:	N 46:48.21	W 68:37.06	Lat:	N 46:44.73
			Long:	W 68:30.56
From:	N 31:10.38	W 60:44.66	Tgt Trk:	0.0
To:	N 61:16.22	W 82:32.56	Tgt Vel:	0.0
			Alt:	660.0 ft

#### RADAR PARAMETERS - for UWB

RTP Channel:	1	Filter damping is Hi	->	10 sec
Resolution:	N/A	PRF Factor is FAST	(262.5 kts)	
Swath width:	Single	Ave Gndspd:	Real	-> 249.7 kts
RMS Time Constant:	2^7	Mocomp Off for Chnl	1, 2, 3, 4	
Position Reference:	ON	GPS Vel/Pos Reference		
Atten. Tracking:	OFF	Adj Gnd Scene:	5000.0 ft	
Range Gate Delta:	0.0 ft	Range Tracking is	OFF	
Azimuth Presum Rate:	Presum6	Clutterlock Reference:	OFF	
TX Chirp Filename:	CTL1U2B	RX Chirp Filename:	CRL1N0A	
Ave Ref Vel ->	.3 fps (s.d.= .9)			
Ave Fil Vel ->	-.5 fps (s.d.= .7)			

NML XMIT PWR	ANT BIAS	Tape Footage	Drive no.
X: -70.0	Elevation:	0.0°	
L: -70.0	Azimuth:	0.0°	Starting: 6780 ft (2)
C: -70.0	Pitch:	0.0°	Ending: 8025 ft (2)
P: 47.0			

Vel Bias	CAL Atten	LINE Map Time (UCT)
X: 1035.0	X: 63.8 dB	Start: 00:22:27
Y: -433.0	L: 63.8 dB	End: 00:25:11
Z: 6697.0	C: 63.8 dB	

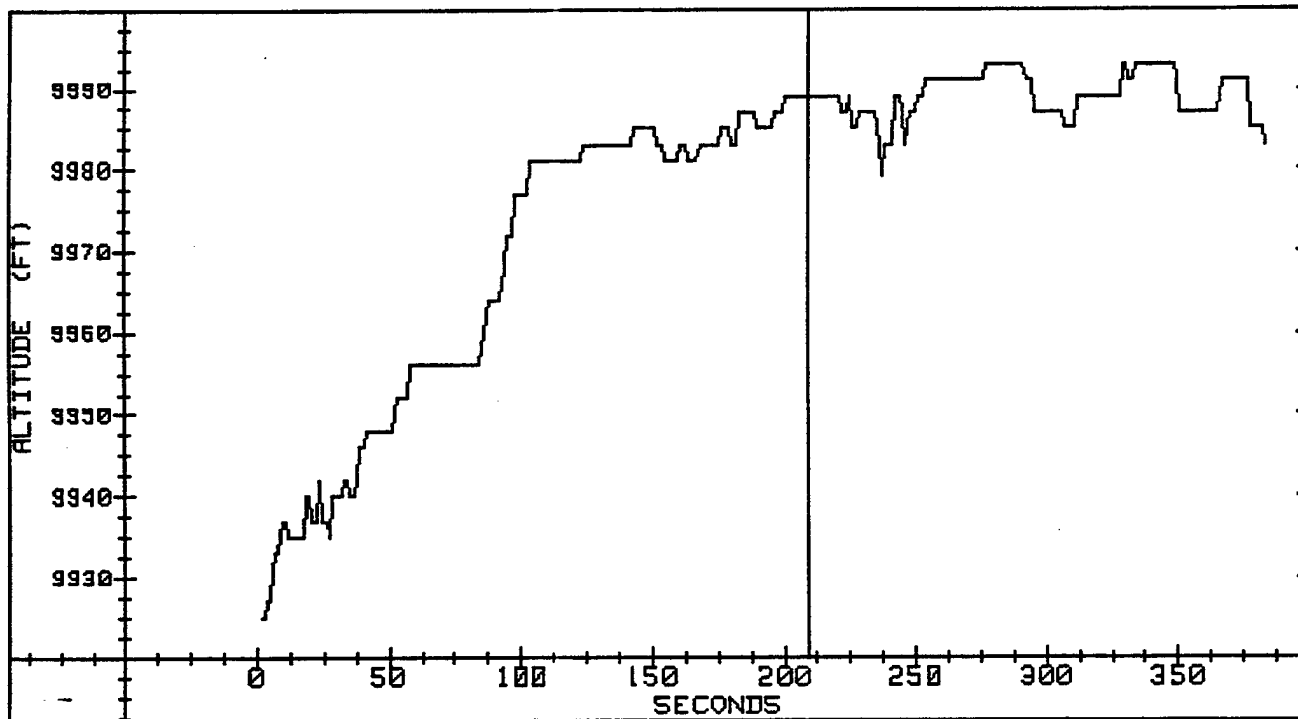
#### Mocomp Counters

Start: 908049 000DDB11h  
End: 935547 000E467Bh

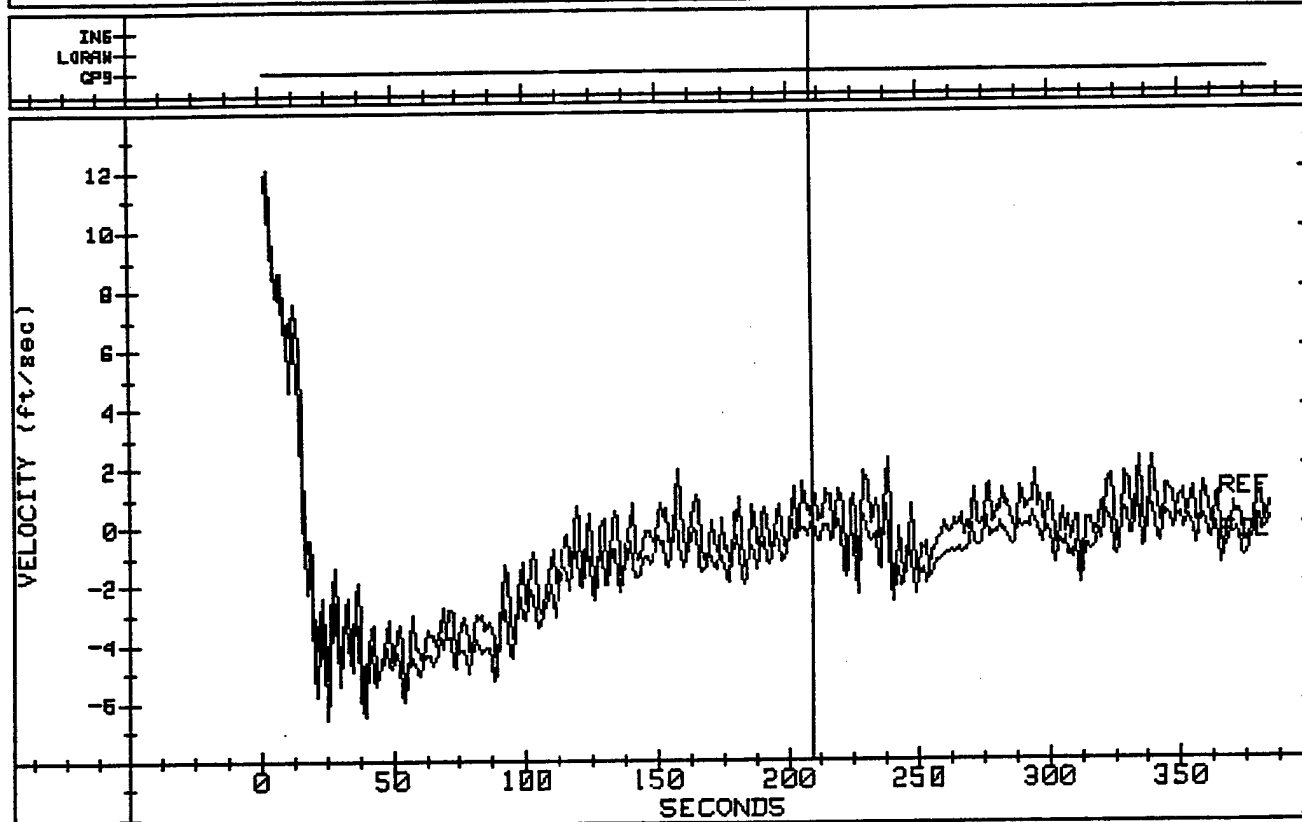
CPA (UCT): 00:00:00  
Alt: 0 ft (GPS)  
Lat: N 0:00: 0  
Lon: E 0:00: 0

BARO ALTITUDE

DAY 170 TIME 0:10 PASS 15 m= 9989, sd= 2.97264

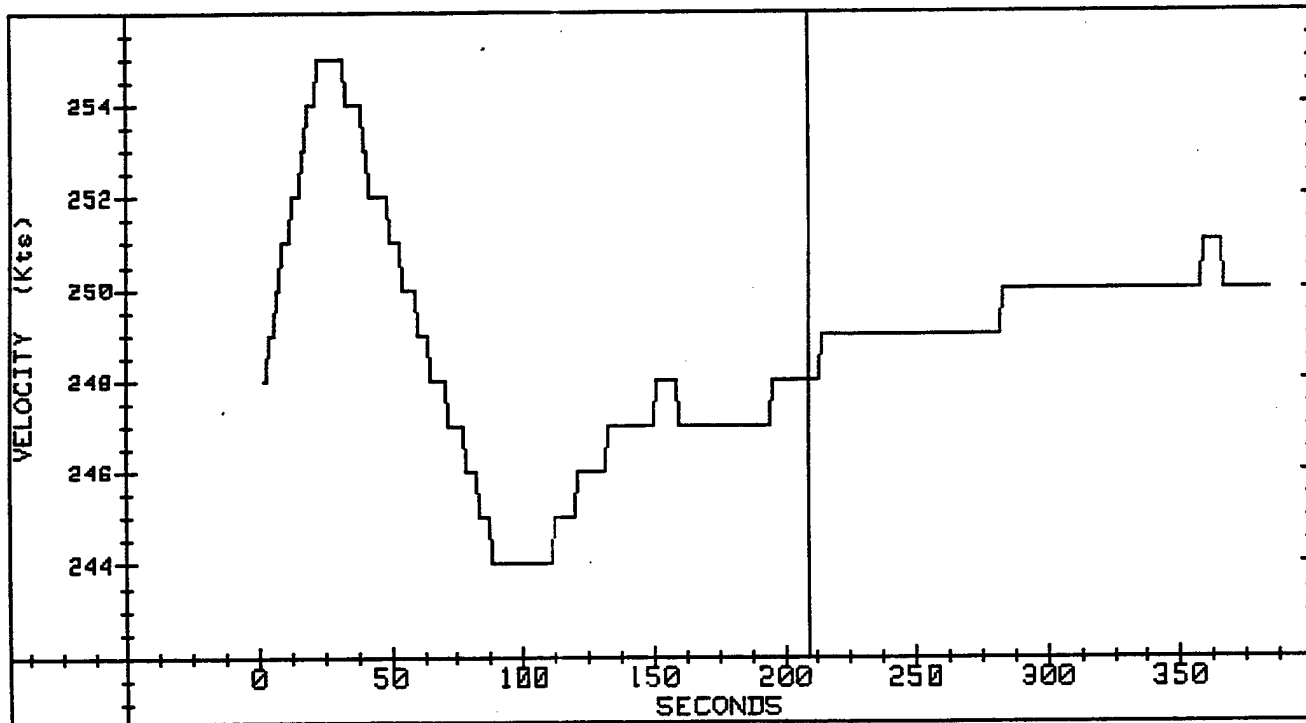


FILTERED vs. REF. VELOCITY  
DAY 178 TIME 0:18 PASS 15



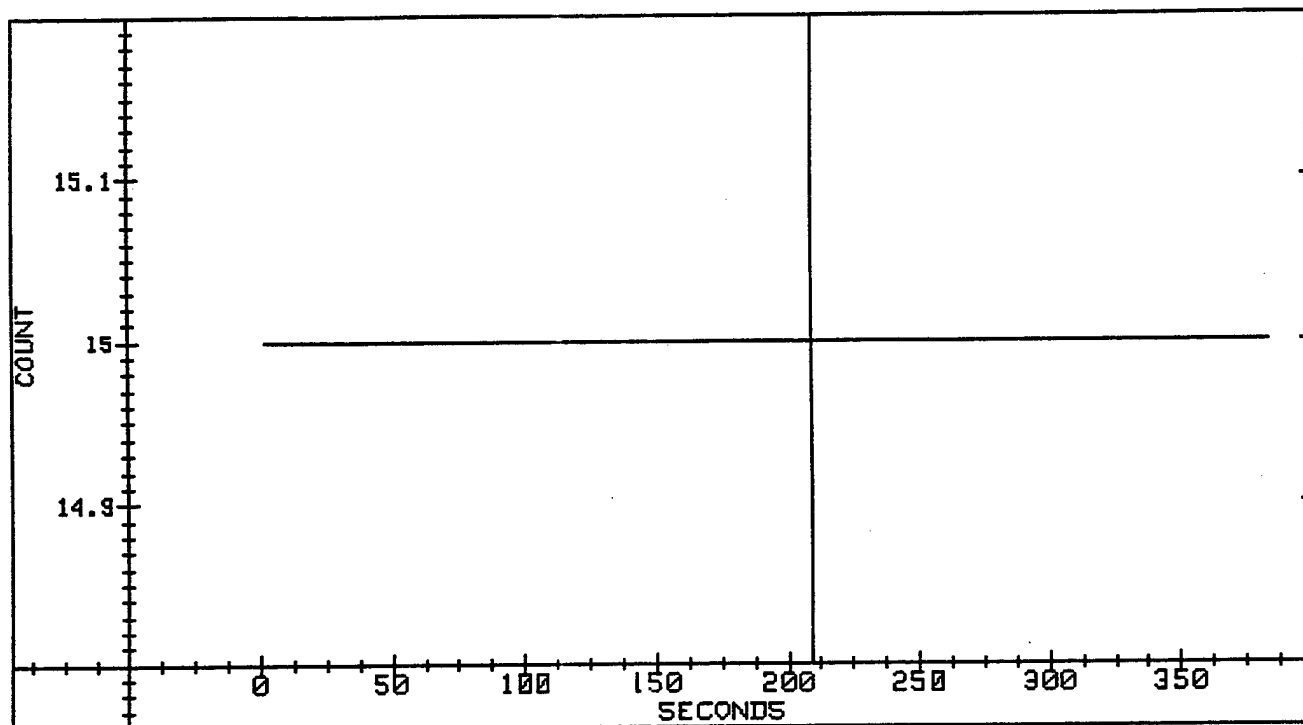
INS GROUND SPEED

DRY 178 TIME 0:18 PASS 15 m= 249.7, sd= .564971



# PASS NUMBER

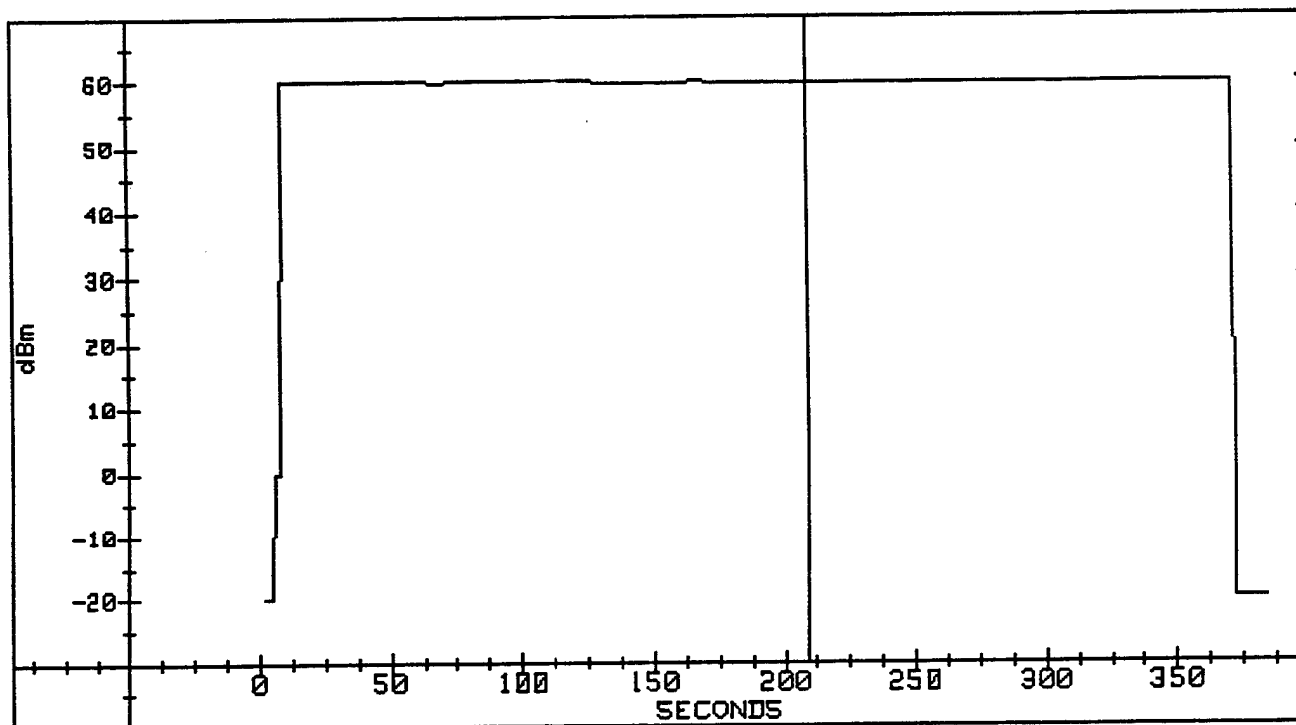
DAY 178 TIME 0:10 PASS 15 m= 15, sd= 0





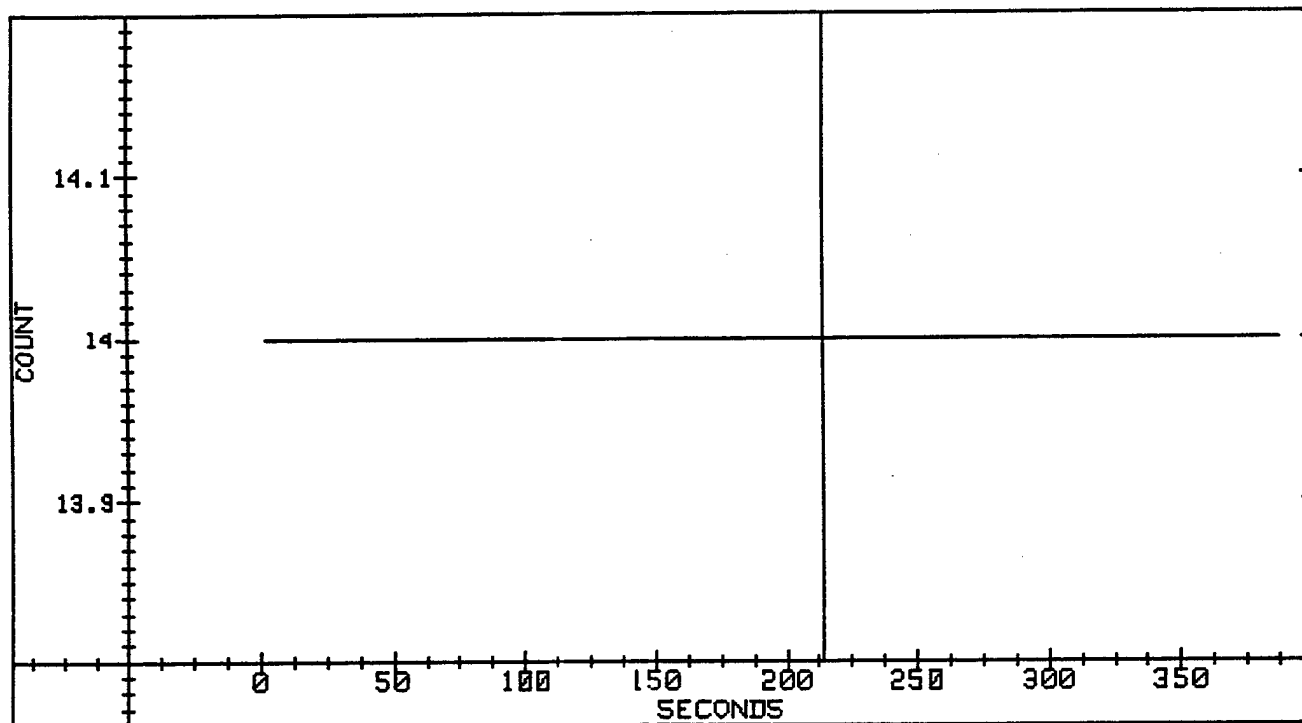
P Band Power

DAY 170 TIME 0:10 PASS 15 m= 53.51, sd= 21.498



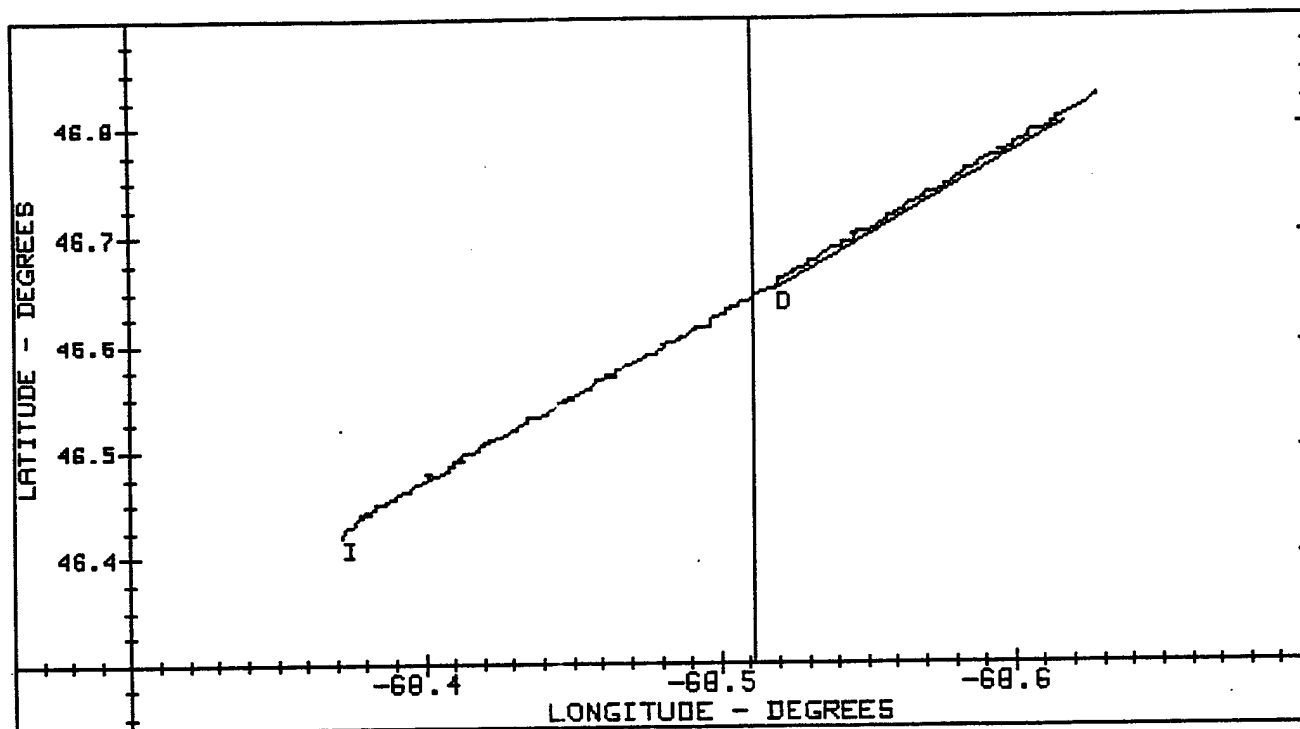
# PASS NUMBER

DAY 178 TIME 0:6 PASS 14 m= 14, sd= 0



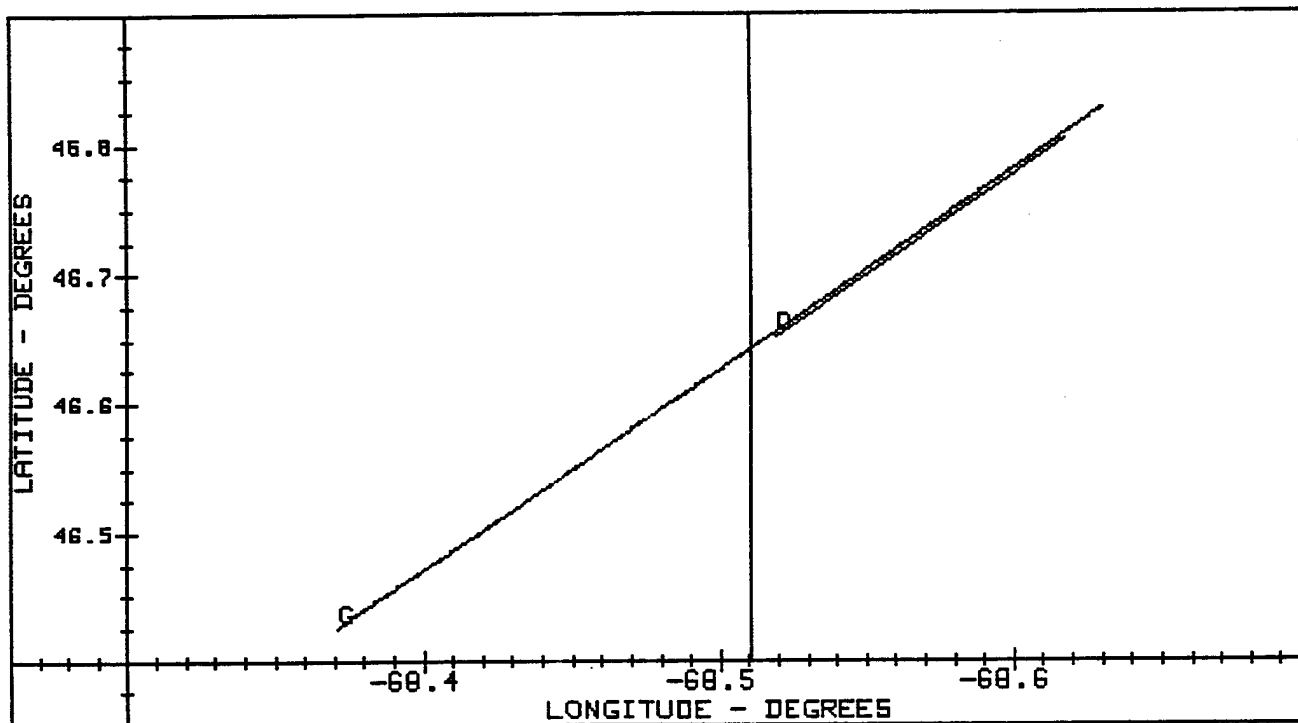
INS AIRCRAFT POSITION

DAY 178 TIME 0:18 PASS 15



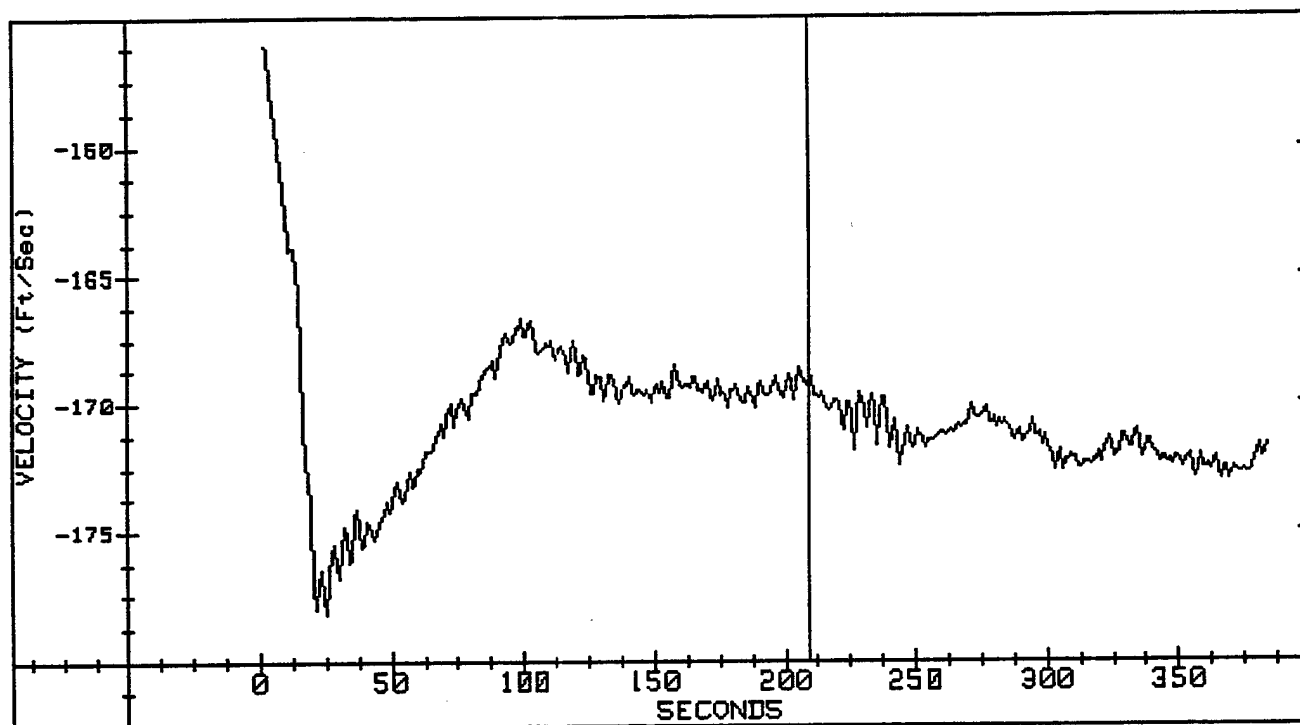
GPS AIRCRAFT POSITION

DAY 178 TIME 0:18 PASS 15



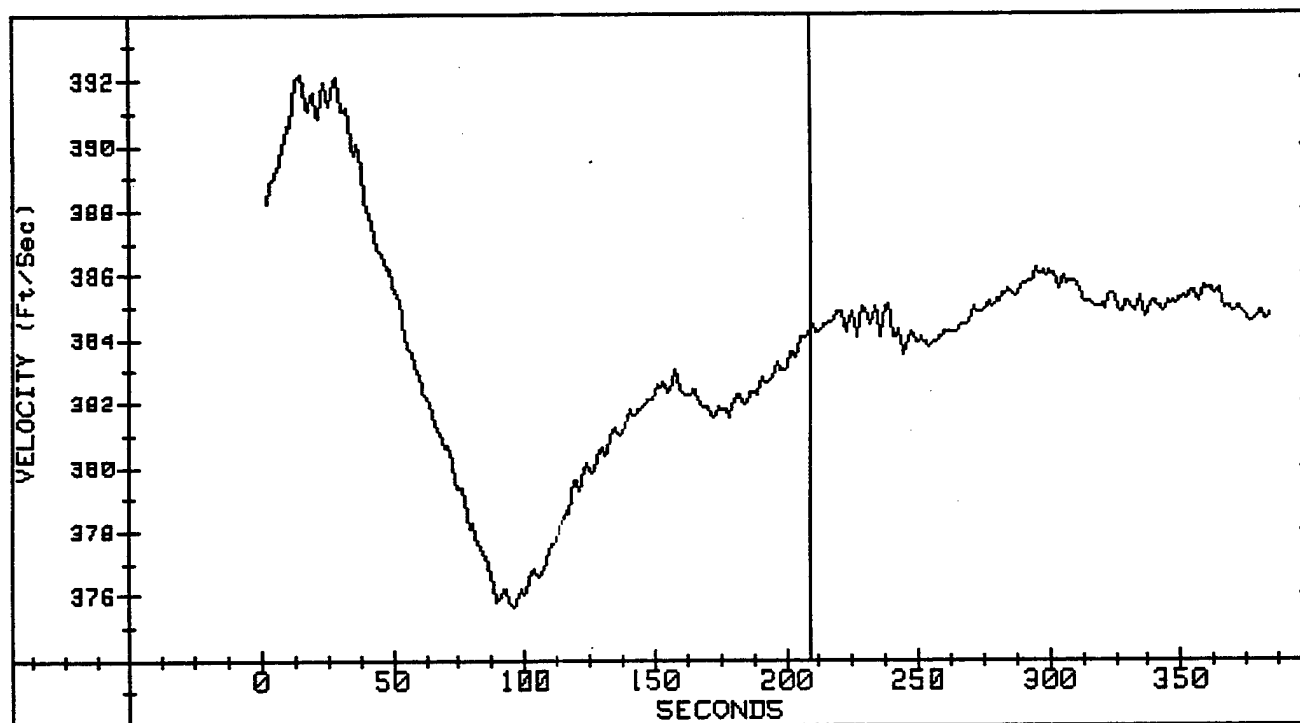
GPS V<sub>e</sub>

DAY 178 TIME 0:18 PASS 15 m= -171.6, sd= .010777



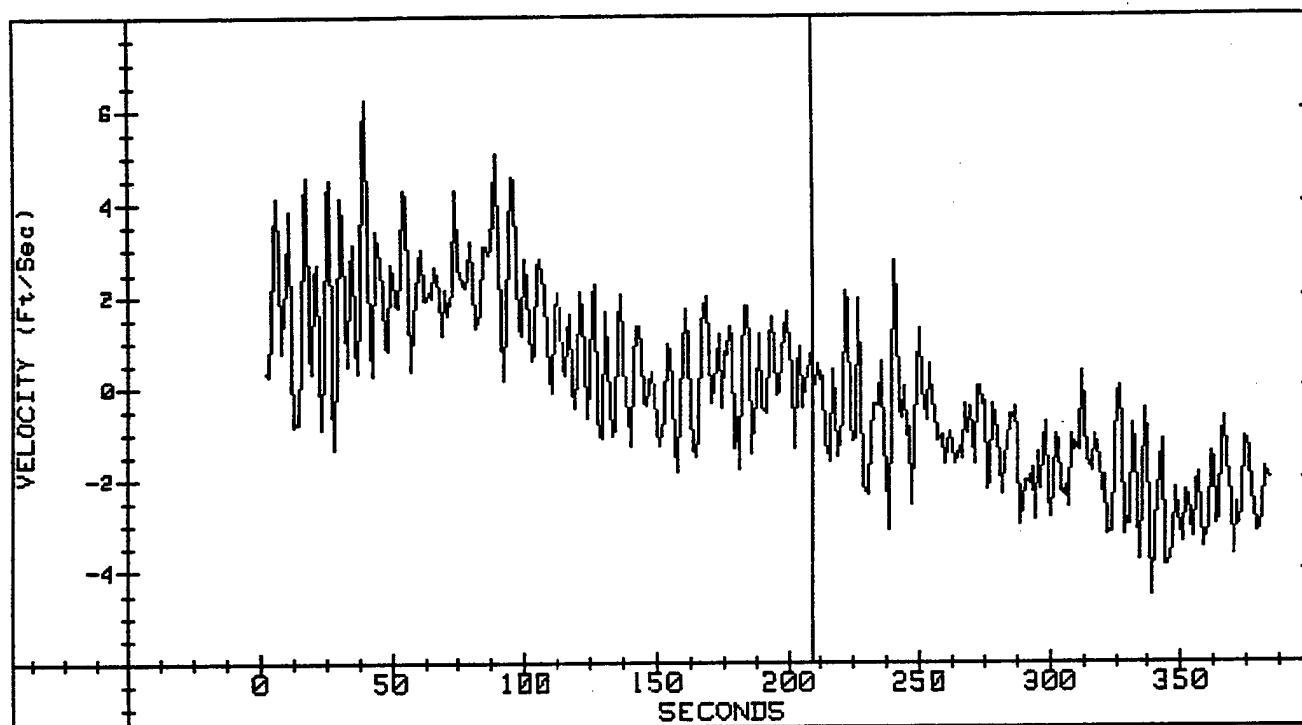
GPS Vn

DAY 17B TIME 0:10 PASS 15 m= 385. sd= .577393



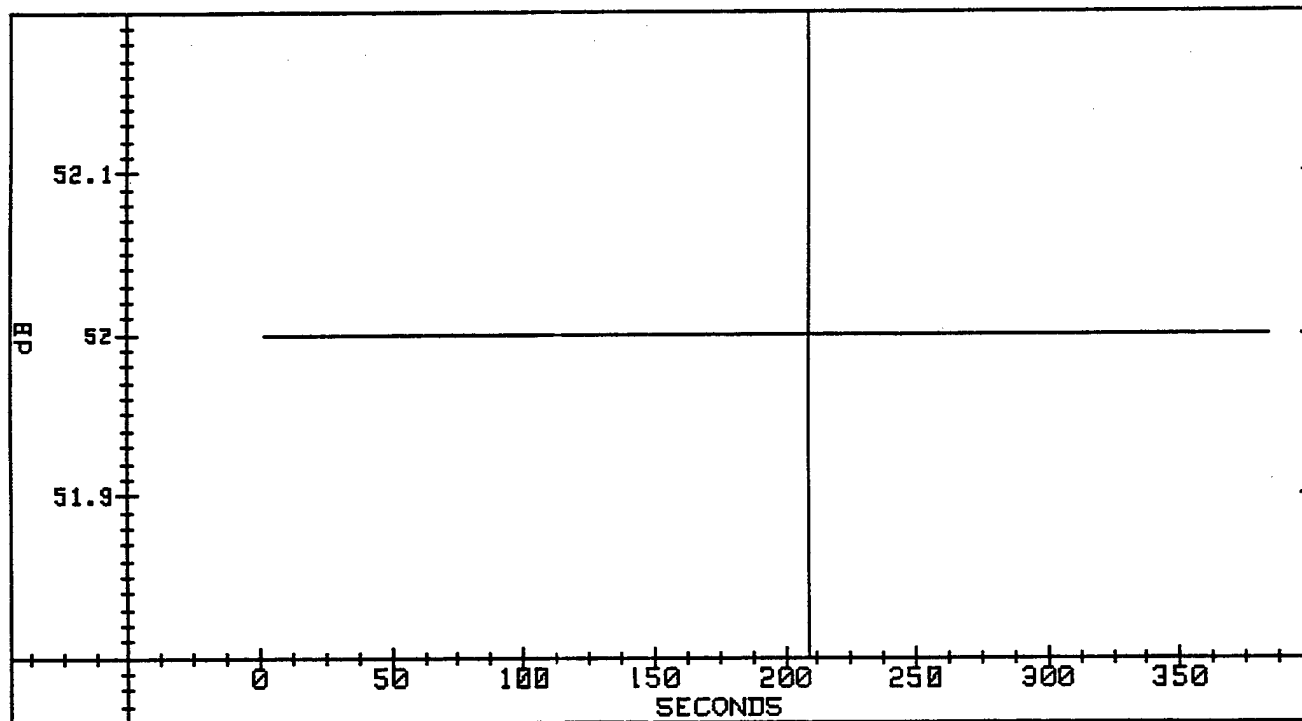
GPS Vv

DAY 178 TIME 0:18 PASS 15 m= -1.544, sd= 1.23151



Ch1 RES Attenuation

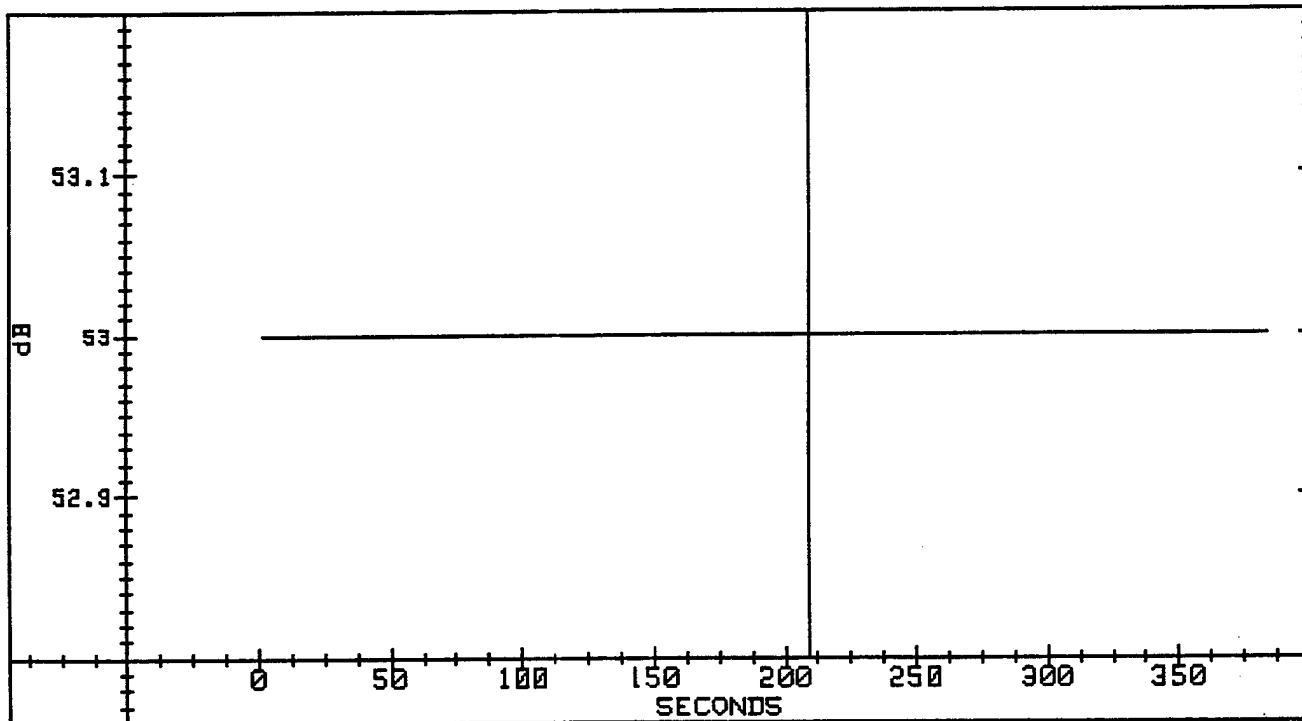
DAY 170 TIME 0:10 PASS 15 m= 52, sd= 0





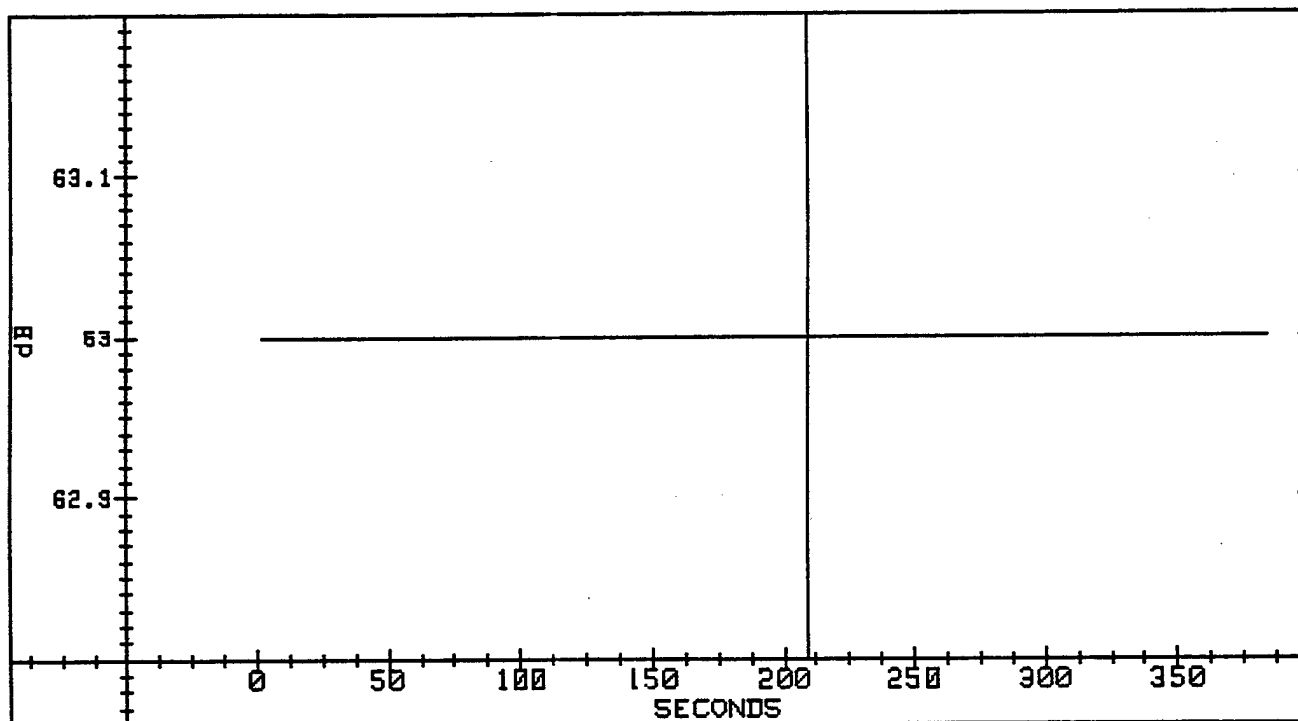
Ch3 RES Attenuation

DAY 170 TIME 0:10 PASS 15 m= 53, sd= 0



Ch4 RES Attenuation

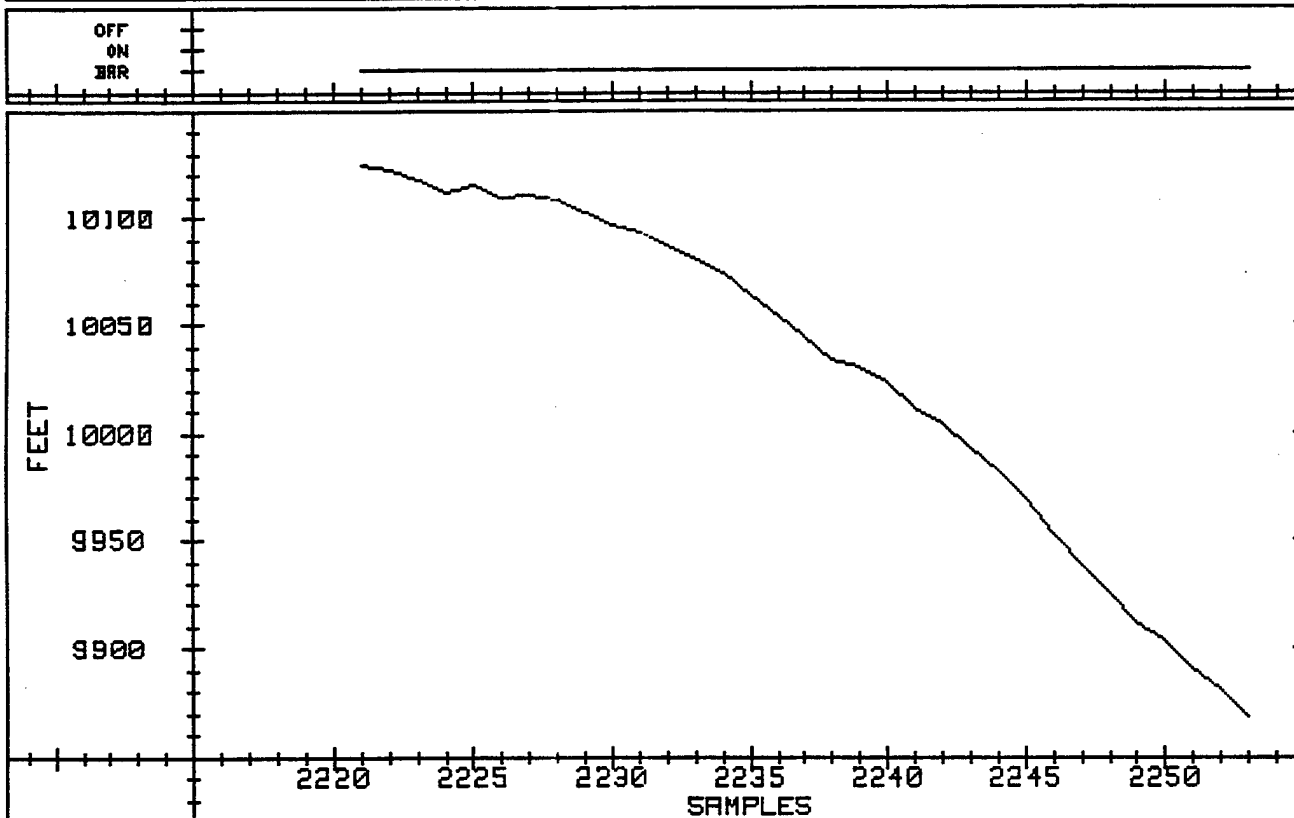
DAY 170 TIME 0:10 PASS 15 m= 63, sd= 0



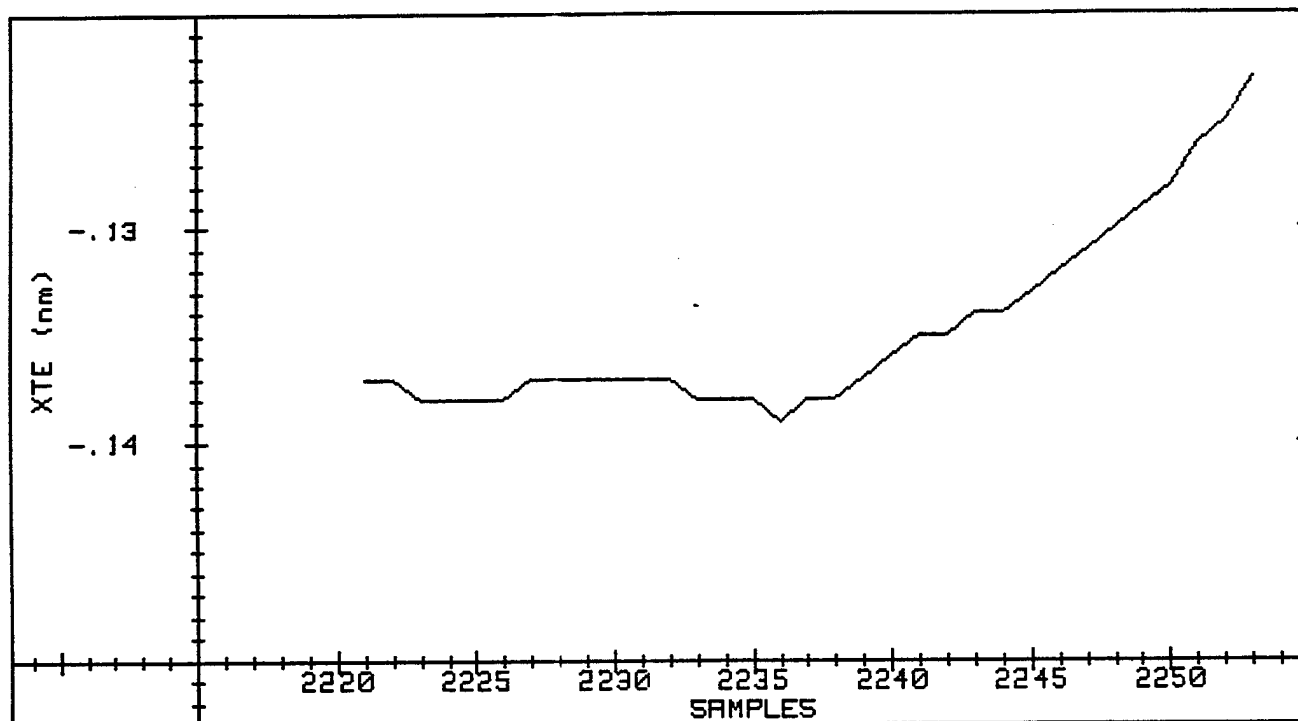
GPS ALTITUDE

MEAN= 10028.4      STANDARD DEVIATION= 80.2277

DATE: June 26, 1995      PASS 15

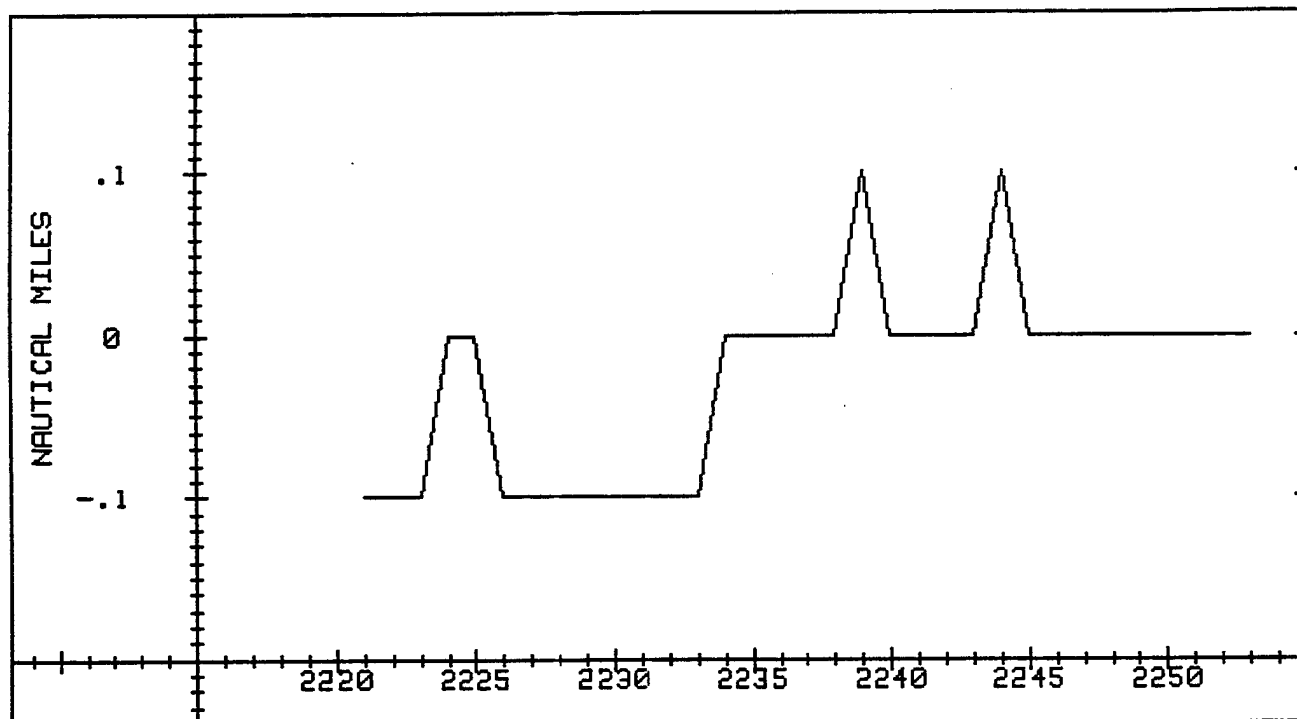


GPS Cross Track Error  
MEAN- -.134597      STANDARD DEVIATION- .00425323  
DATE: June 26, 1995      PASS 15

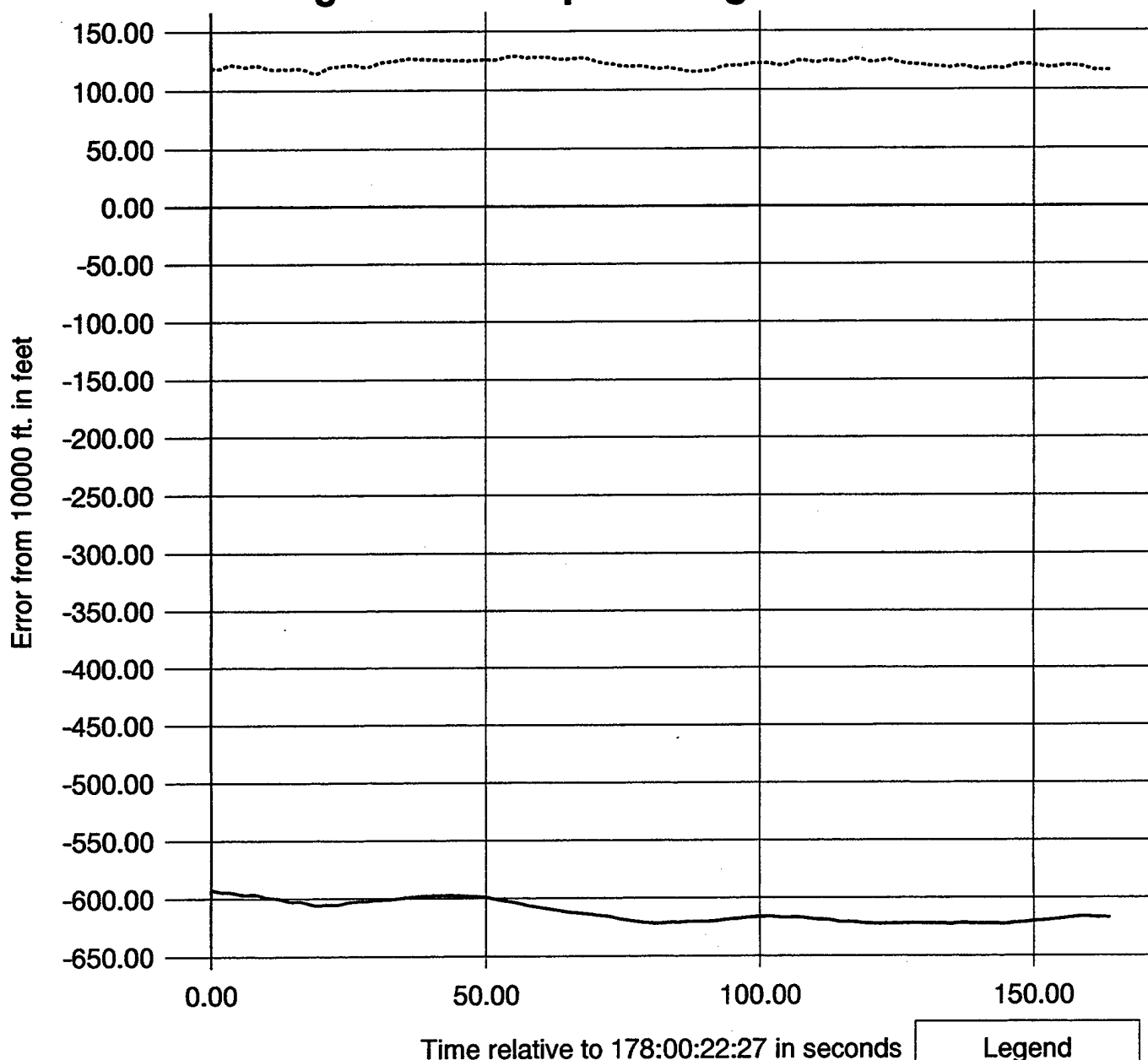


INS CROSS TRACK ERROR

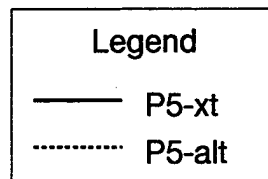
MEAN= -.0272727      STANDARD DEVIATION= .0565296  
DATE: June 26, 1995      PASS 15



# Portage, ME - June 26, 1995 - Pass 15 - Xtk. and Alt. Errors Higher alt. and port are greater than zero



	Mean	St. Dev.
ALT.	121.74	3.48
XTK.	-612.08	9.57



27 Jun 1995  
Tape: E1422

Post-line Data Sheet  
Line 29  
Mission: PORTAGE MAINE, DAY

Time: 178:00:31:42  
Pass 16  
Req.# 16

#### AIRCRAFT & CHANNEL DATA

Altitude		CH 1	CH 2	CH 3	CH 4
Desired:	10000 ft	p-VV	p-VH	p-HV	p-HH
Baro:	9959 ft s.d.=	4 Swath Ctr Ang:	30.0°	30.0°	30.0°
Slt. rng:	18680 ft	Tgt Dep Ang:	30.0°	30.0°	30.0°
Look:	Right	St rng (ft):	17141	17141	17141
Depr Ang:	25.0°	Near Rng Dep:	35.5°	35.5°	35.5°
Des. trk:	156.0°	Far Rng Dep:	17.4°	17.4°	17.4°
Start Sq:	90.0°	Atten (dB):	53.0	54.0	53.0
End Sq:	90.0°	RMS Video (%FS)	27.7	10.2	22.2
					12.8

#### WAYPOINTS

	Latitude	Longitude
Line up:	N 47:01.32	W 68:37.14
Start:	N 46:50.37	W 68:30.00
End:	N 46:41.24	W 68:24.09
From:	N 61:18.45	W 82:26.03
To:	N 31:12.45	W 60:37.70

Main Target: GP  
Mocomp Point:  
Lat: N 46:44.73  
Long: W 68:30.56  
Tgt Trk: 0.0 Tgt Vel: 0.0  
Alt: 660.0 ft

#### RADAR PARAMETERS - for UWB

RTP Channel: 1  
Resolution: N/A  
Swath width: Single  
RMS Time Constant: 2^7  
Position Reference: ON  
Atten. Tracking: OFF  
Range Gate Delta: 0.0 ft  
Azimuth Presum Rate: Presum6  
TX Chirp Filename: CTL1U2B

Filter damping is Hi -> 10 sec  
PRF Factor is FAST (262.5 kts)  
Ave Gndspd: Real -> 250.1 kts  
Mocomp Off for Chnl 1, 2, 3, 4  
GPS Vel/Pos Reference  
Adj Gnd Scene: 5000.0 ft  
Range Tracking is OFF  
Clutterlock Reference: OFF  
RX Chirp Filename: CRL1N0A

Ave Ref Vel -> -0.0 fps (s.d.= 1.4)  
Ave Fil Vel -> 1.0 fps (s.d.= 1.3)

NML XMIT PWR	ANT BIAS	Tape Footage	Drive no.
X: -70.0	Elevation: 0.0°	Starting: 8038 ft	(2)
L: -70.0	Azimuth: 0.0°	Ending: 9267 ft	(2)
C: -70.0	Pitch: 0.0°		
P: 47.1			

Vel Bias	CAL Atten
X: 1035.0	X: 63.8 dB
Y: -433.0	L: 63.8 dB
Z: 6697.0	C: 63.8 dB

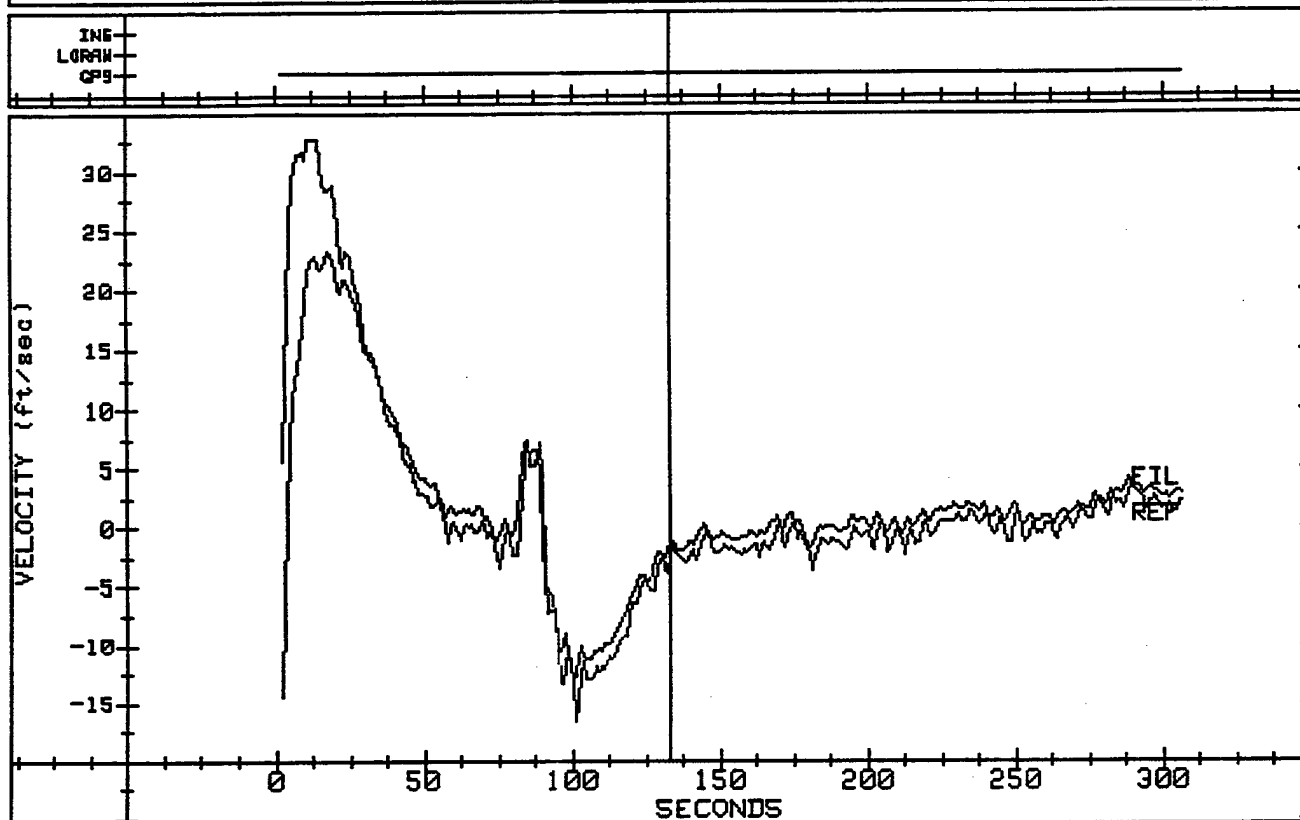
LINE Map Time (UCT)  
Start: 00:31:42  
End: 00:34:24

#### Mocomp Counters

Start: 959726 000EA4EEh  
End: 986894 000F0F0Eh

CPA (UCT): 00:00:00  
Alt: 0 ft (GPS)  
Lat: N 0:00: 0  
Lon: E 0:00: 0

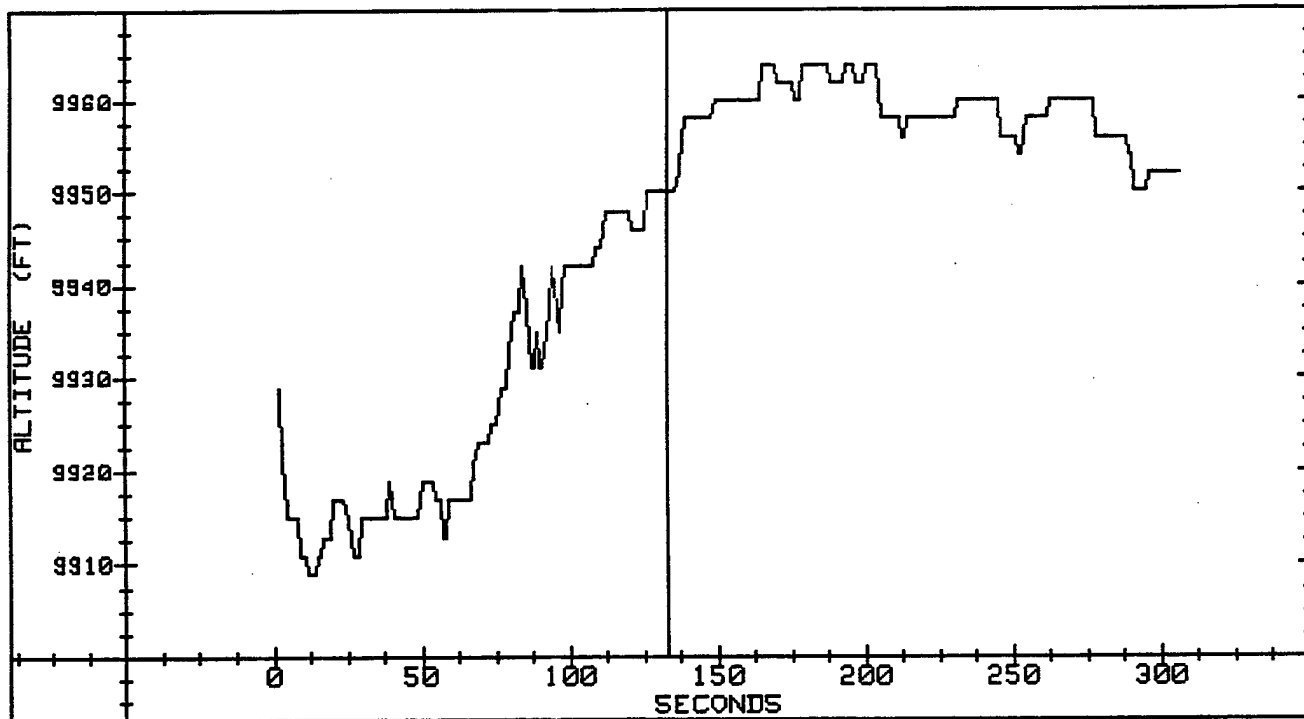
FILTERED vs. REF. VELOCITY  
DAY 170 TIME 0:29 PASS 16





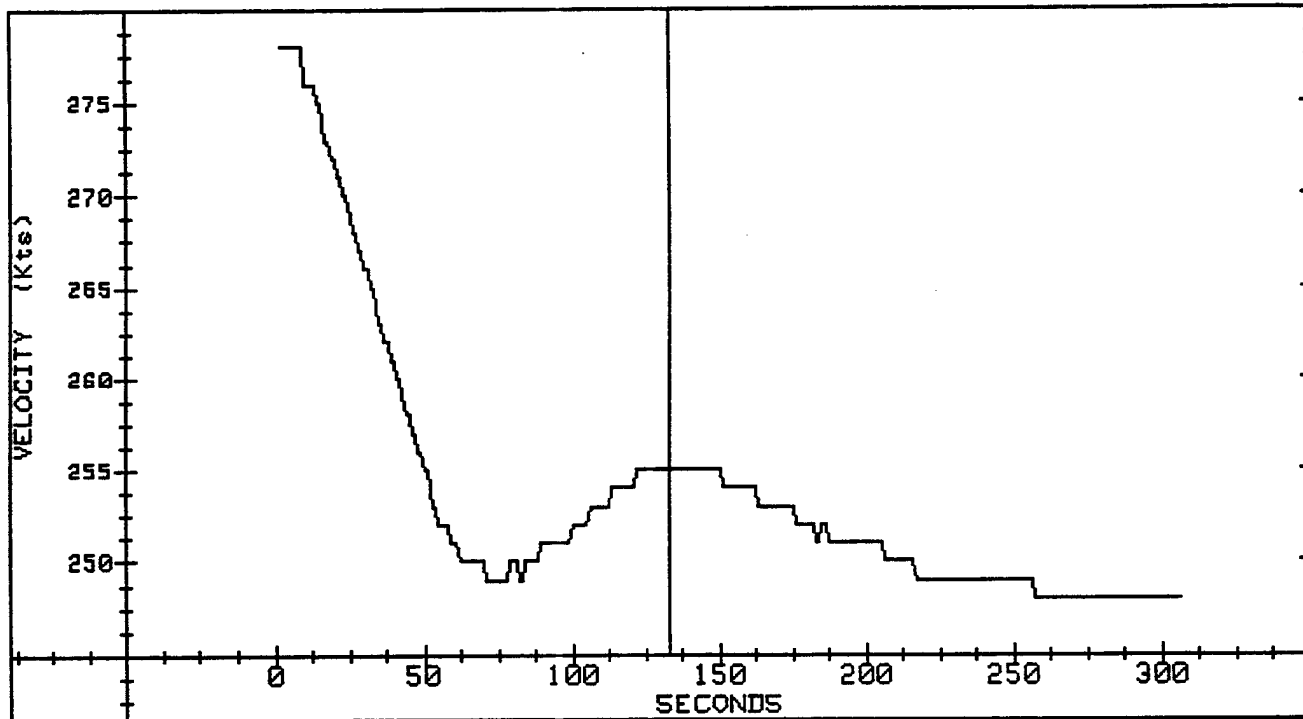
BARO ALTITUDE

DAY 178 TIME 0:29 PASS 16 m= 9959, sd= 3.50096



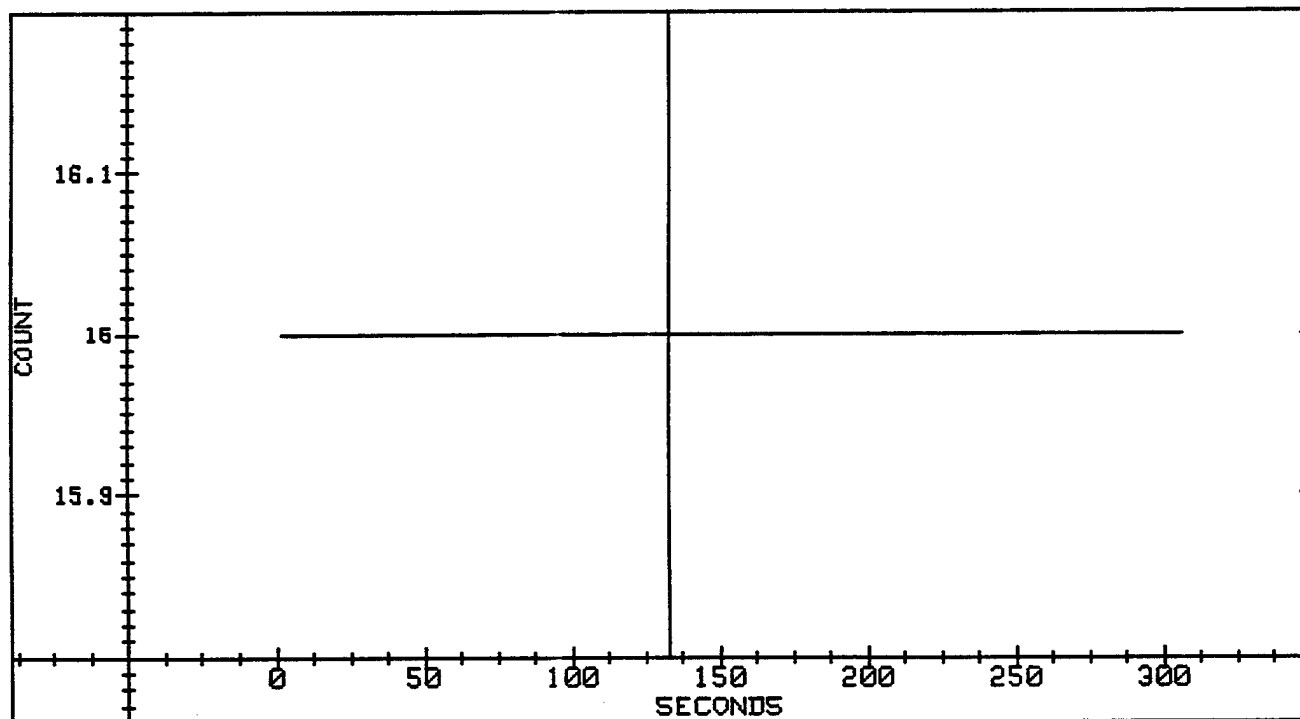
INS GROUND SPEED

DAY 178 TIME 0:29 PASS 16 m= 250.1, sd= 2.18513



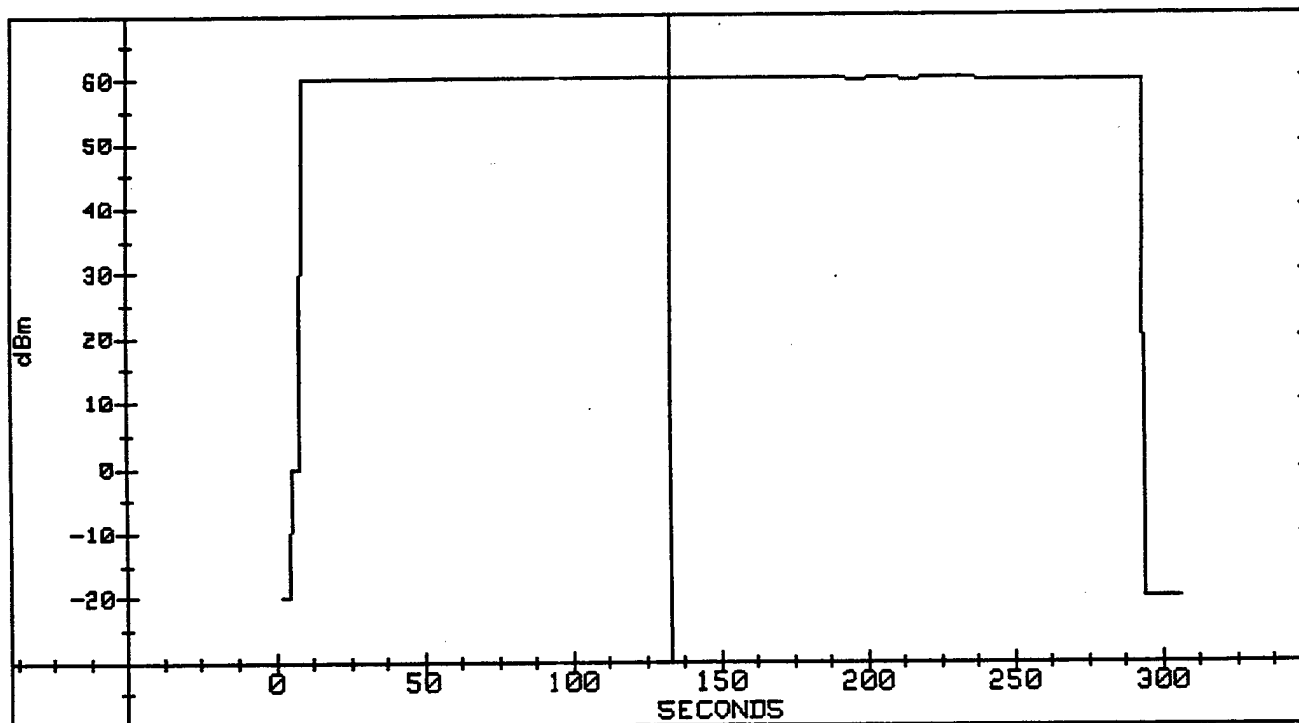
PASS NUMBER

DAY 170 TIME 0:29 PASS 16 m= 16, sd= 0



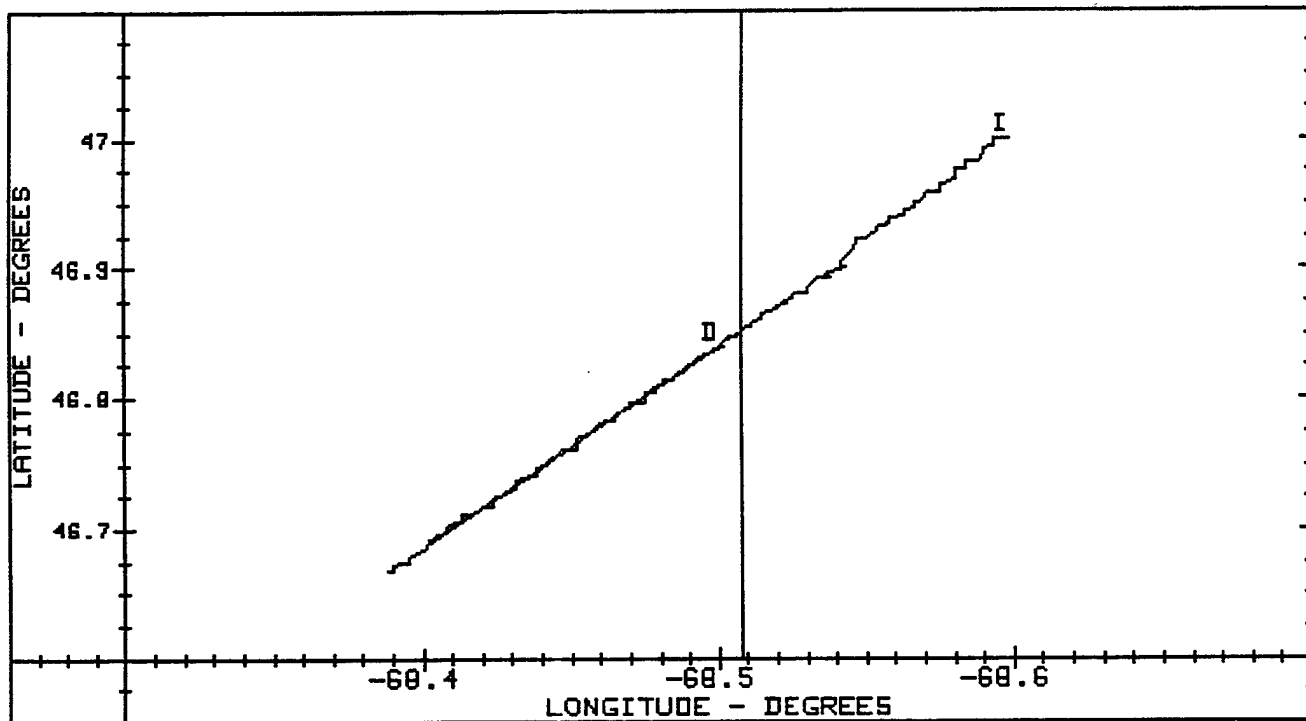
P Band Power

DRY 178 TIME 0:29 PRSS 16 m= 53.49, sd= 21.6332



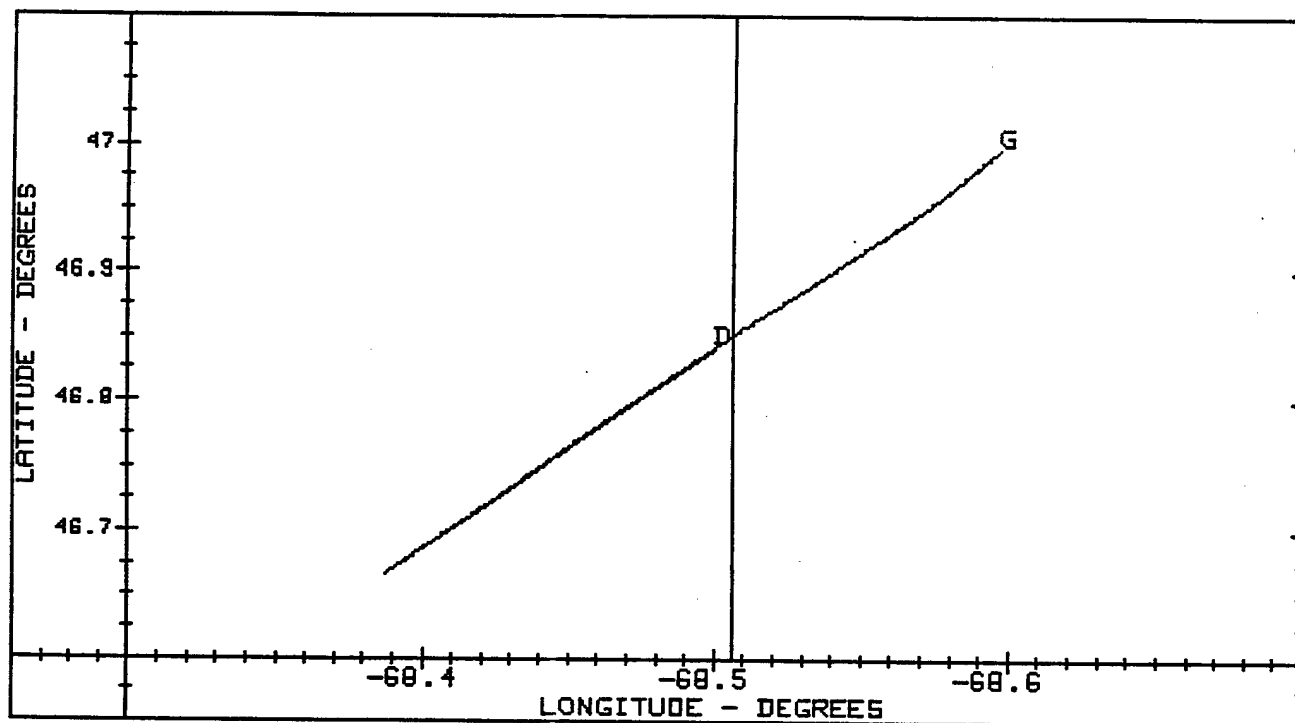
INS AIRCRAFT POSITION

DAY 170 TIME 0:29 PASS 16



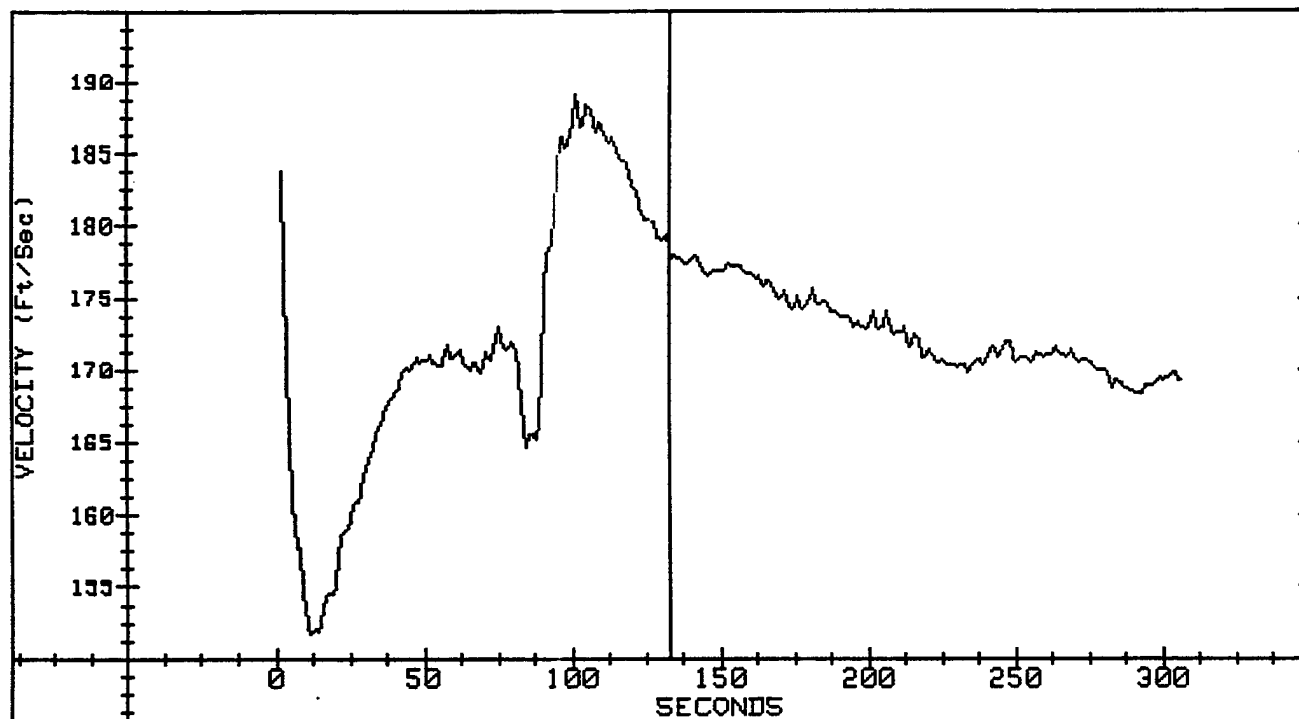
GPS AIRCRAFT POSITION

DAY 178 TIME 0:29 PASS 16



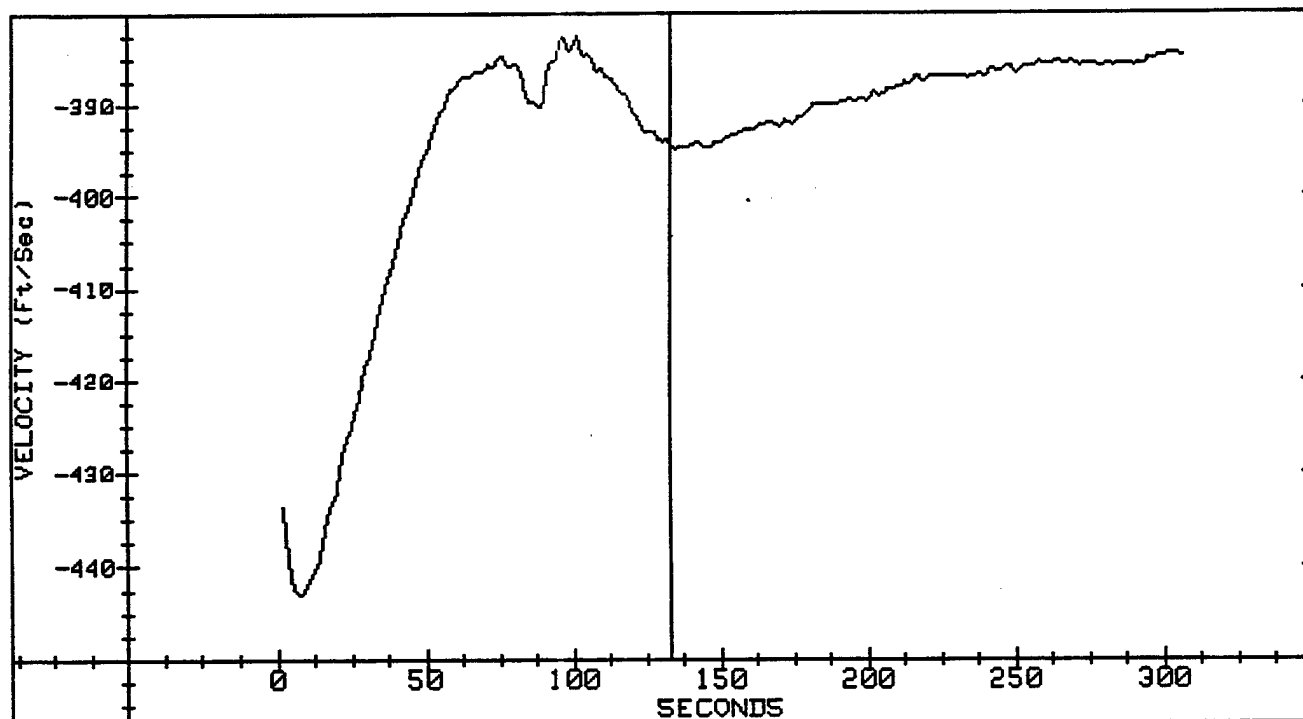
GPS V<sub>e</sub>

DRY 170 TIME 0:29 PASS 16 m= 172.3, sd= 2.56B21



GPS Vn

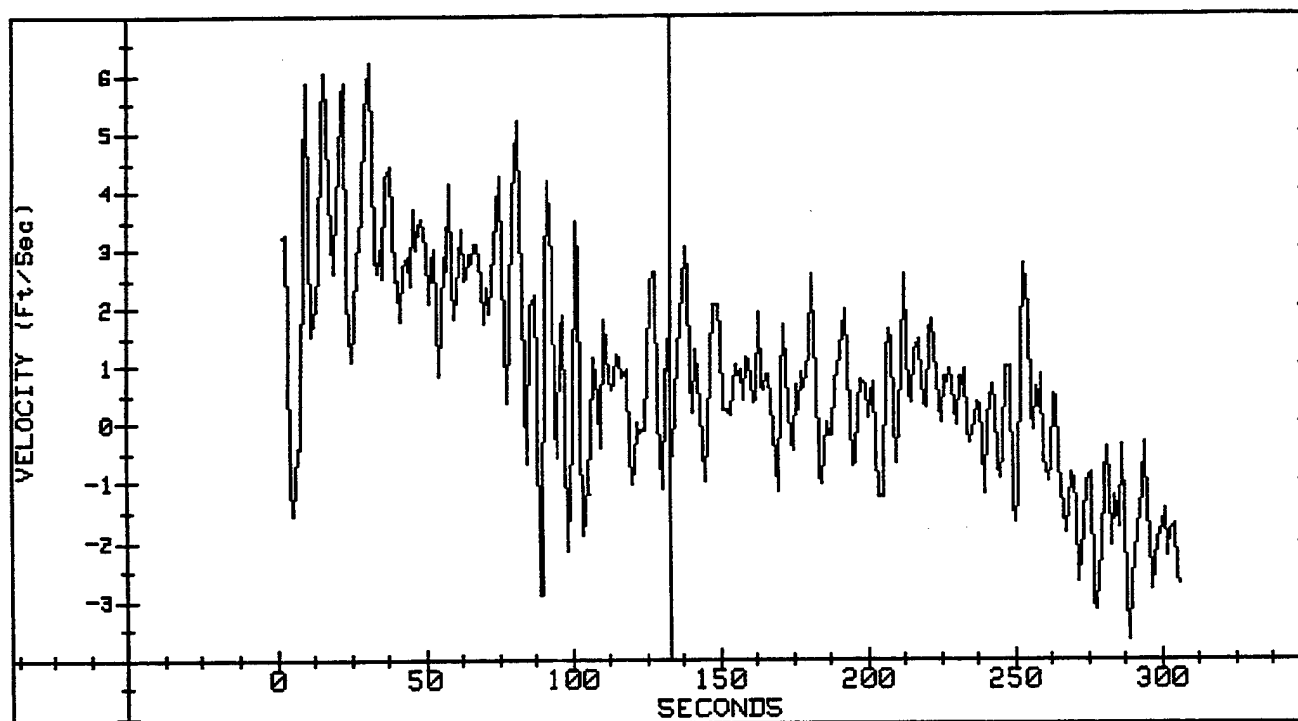
DAY 170 TIME 0:29 PASS 16 m= -300.2, sd= 2.91298





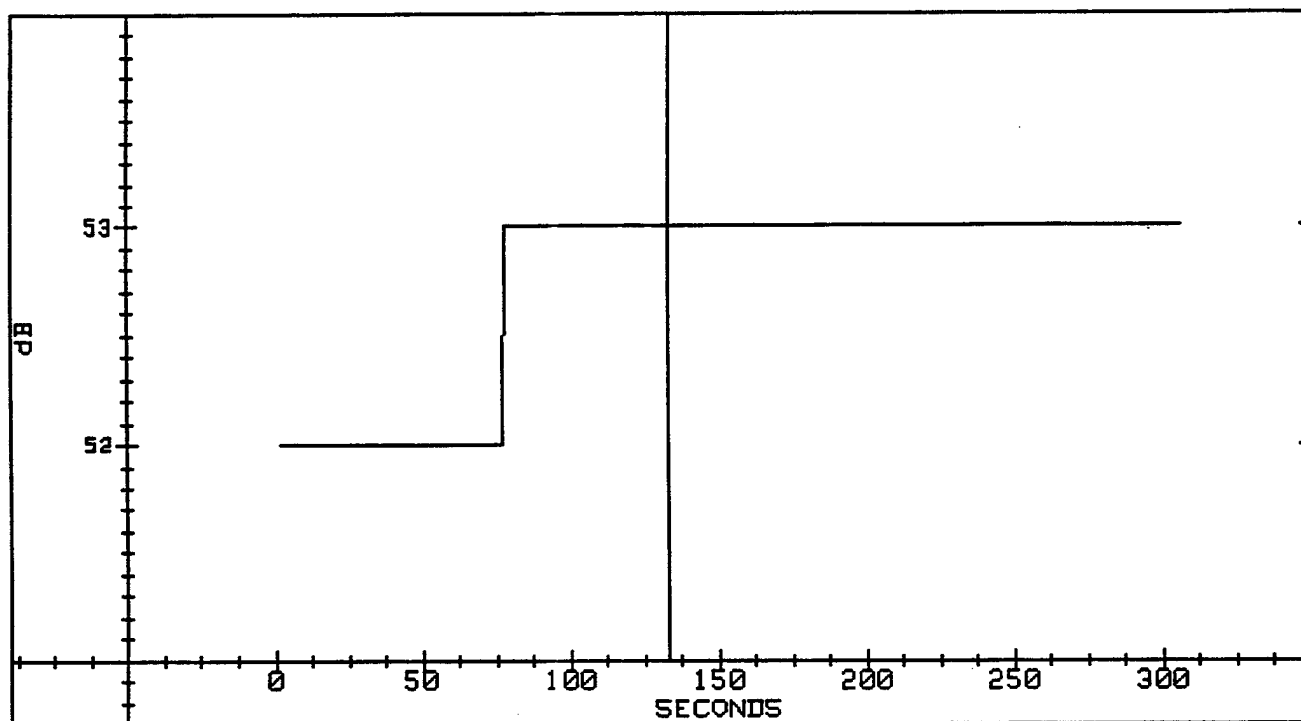
GPS Vv

DAY 178 TIME 0:29 PASS 16 m= -.1123, sd= 1.2756



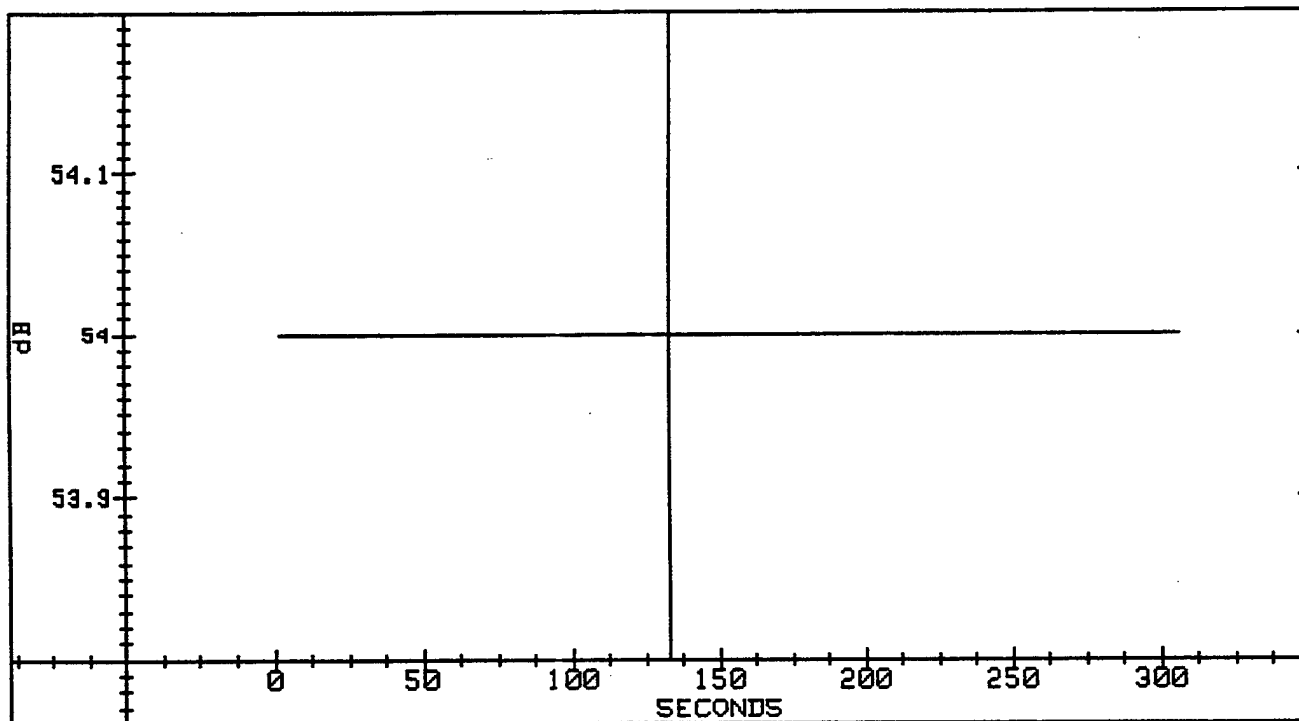
Ch1 RES Attenuation

DAY 178 TIME 0:29 PASS 16 m= 53, sd= 0



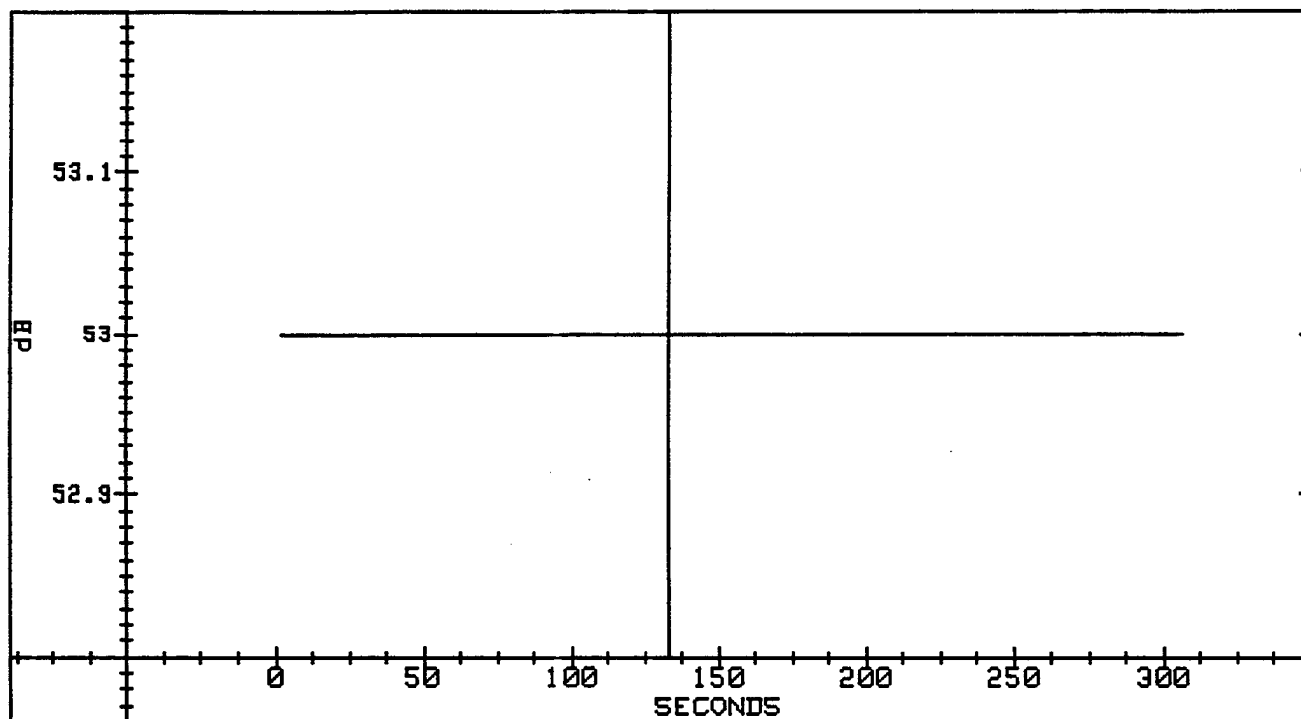
Ch2 RES Attenuation

DAY 170 TIME 0:29 PASS 16 m= 54. sd= 0



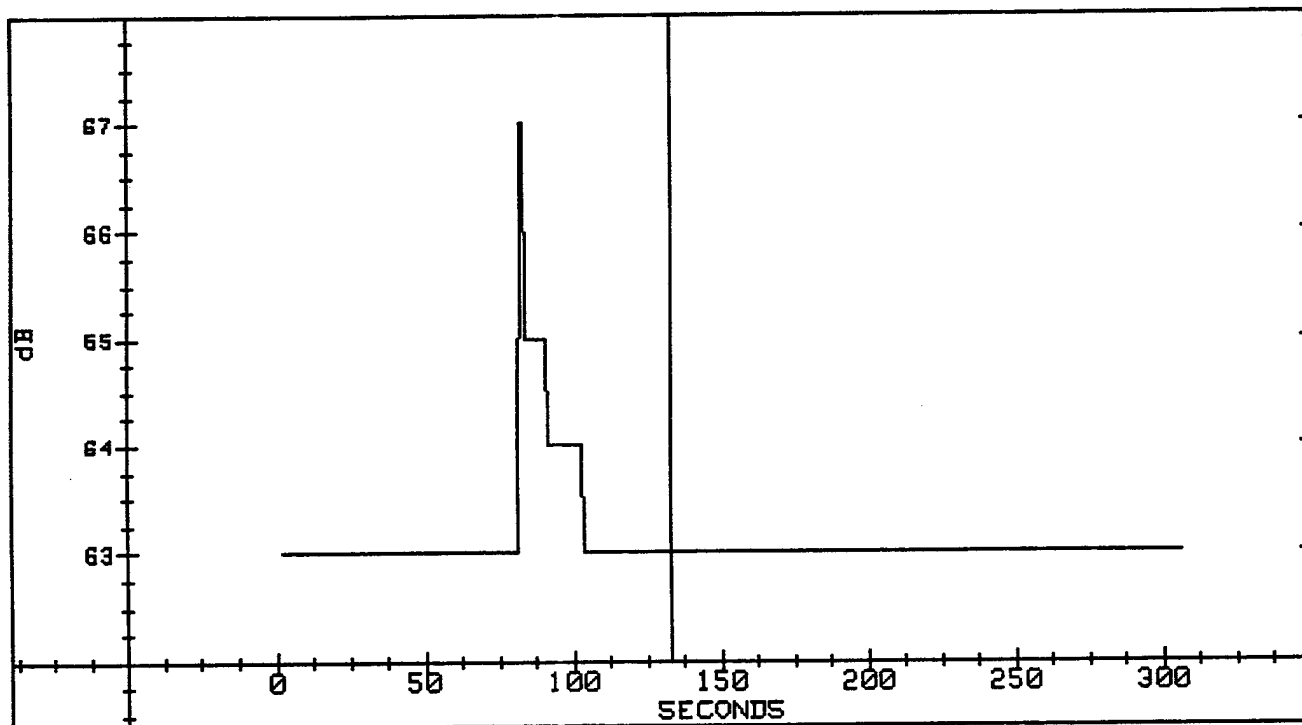
Ch3 RES Attenuation

DAY 170 TIME 0:29 PASS 16 m= 53, sd= 0



Ch4 RES Attenuation

DAY 170 TIME 0:29 PASS 16 m= 63, sd= 0

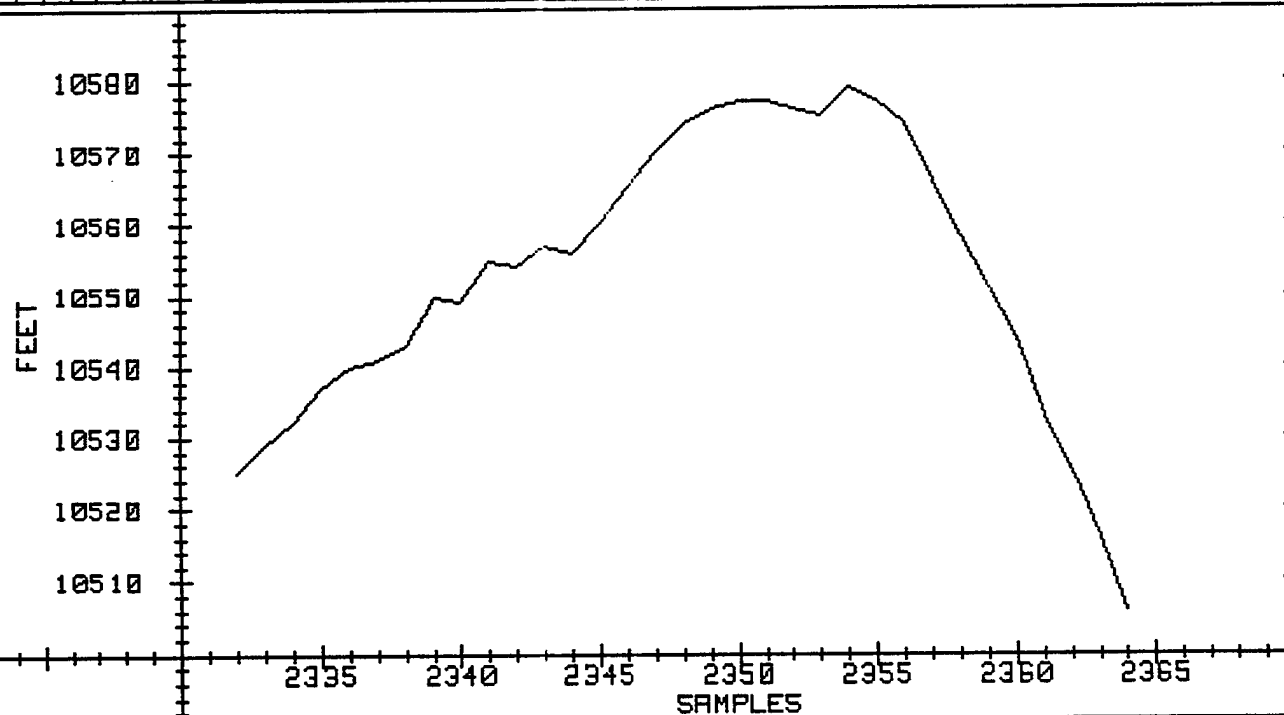


GPS ALTITUDE

MEAN= 10552.9 STANDARD DEVIATION= 19.7529

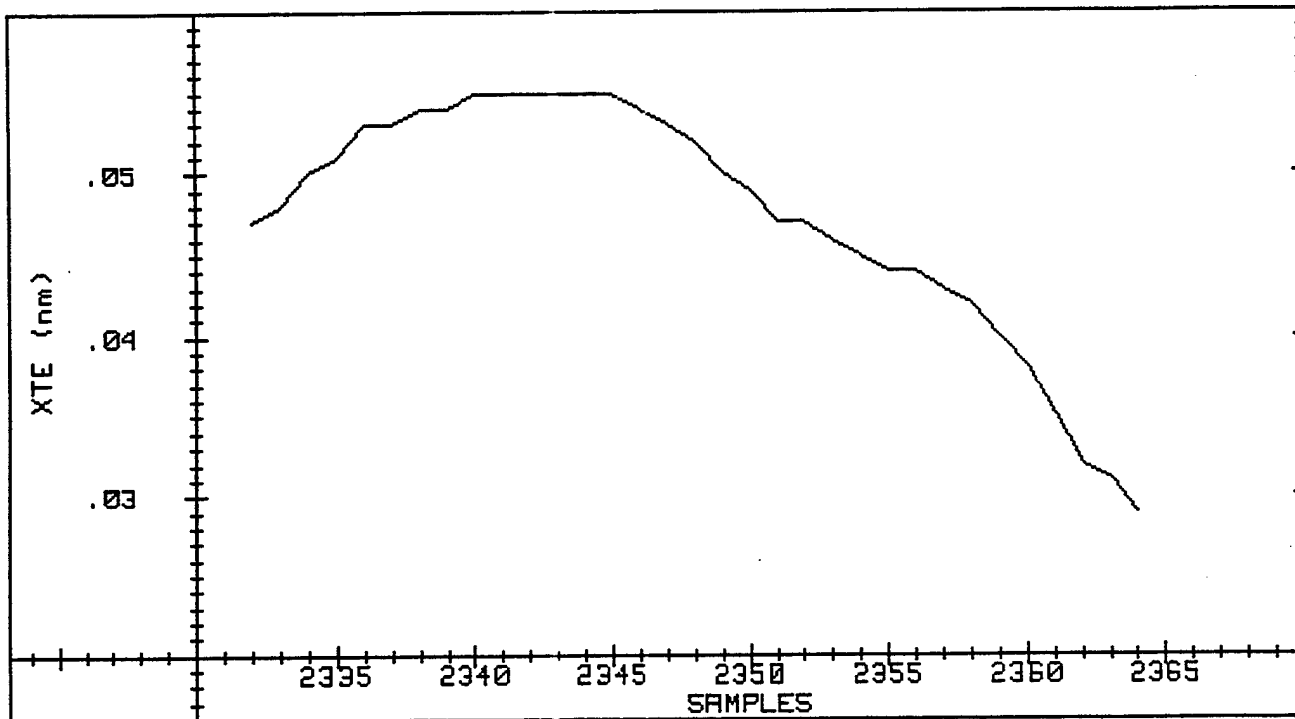
DATE: June 26, 1995 PASS 16

OFF  
ON  
BAR



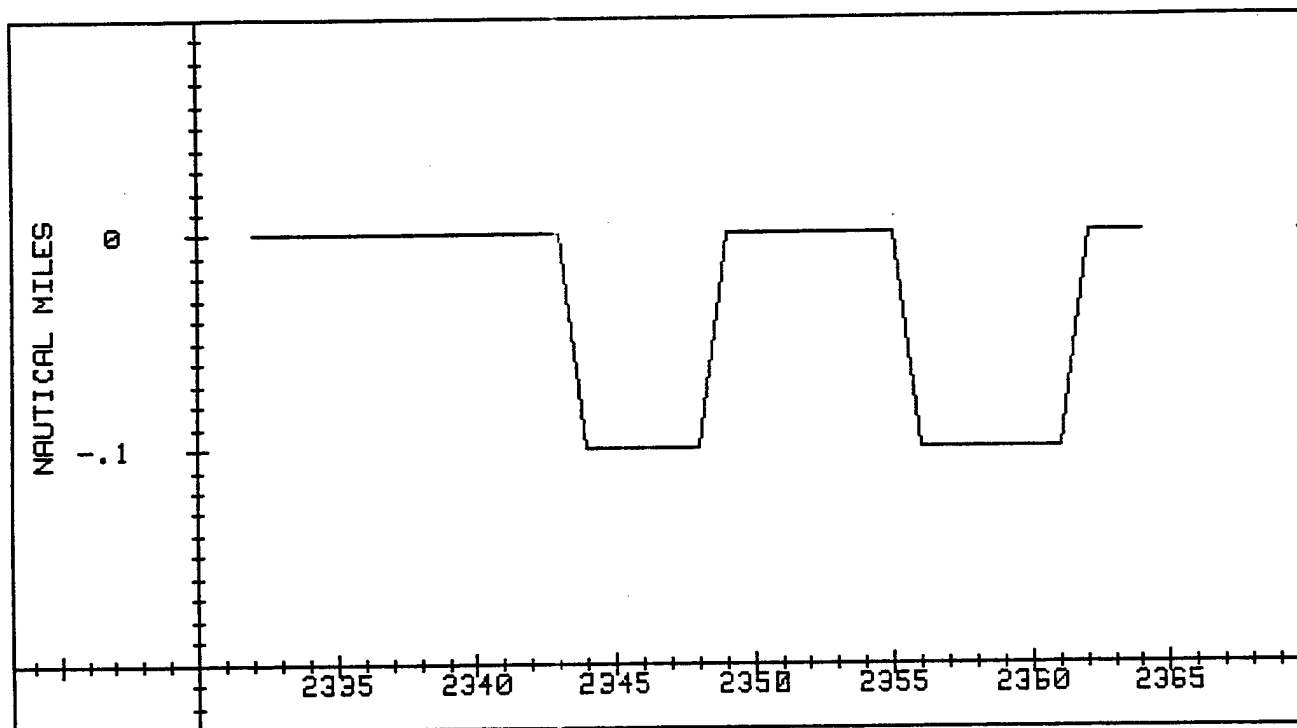
GPS Cross Track Error

MEAN= .047303      STANDARD DEVIATION= .00747312  
DATE: June 26, 1995      PASS 16



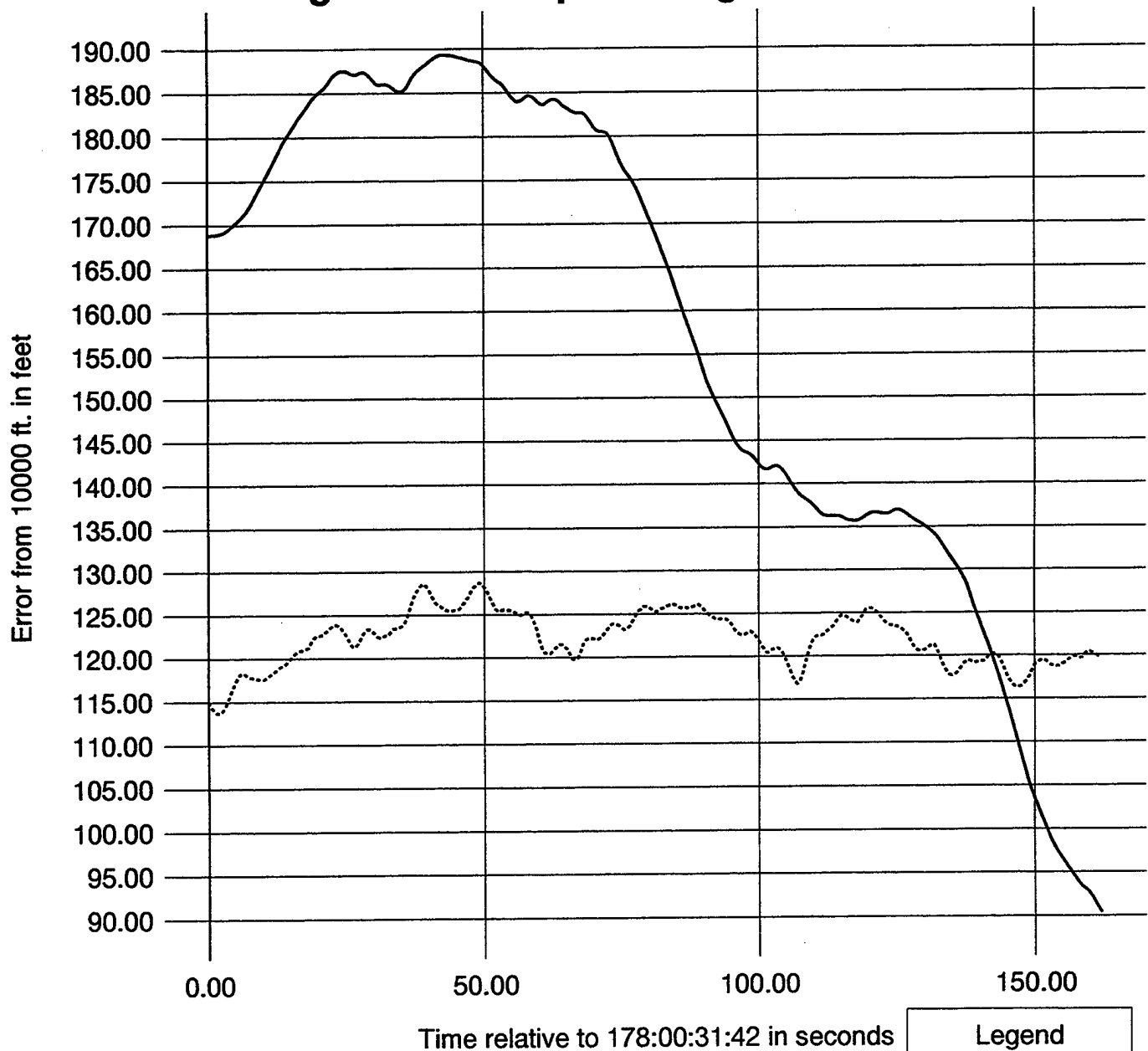
INS CROSS TRACK ERROR

MEAN= -.0333333 STANDARD DEVIATION= .0471405  
DATE: June 26, 1995 PASS 16





# **Portage, ME - June 26, 1995 - Pass 16 - Xtk. and Alt. Errors** **Higher alt. and port are greater than zero**



	Mean	St. Dev.
ALT.	122.13	3.18
XTK.	156.77	29.26

Legend	
—	P5-xt
.....	P5-alt

27 Jun 1995  
Tape: E1423

Post-line Data Sheet  
Line 31  
Mission: PORTAGE MAINE, DAY

Time: 178:00:44:17  
Pass 17  
Req.# 17

#### AIRCRAFT & CHANNEL DATA

Altitude			CH 1	CH 2	CH 3	CH 4
Desired:	10000 ft	Wave/Pol.:	p-VV	p-VH	p-HV	p-HH
Baro:	9972 ft s.d.=	3 Swath Ctr Ang:	28.0°	28.0°	28.0°	28.0°
Slt. rng:	19592 ft	Tgt Dep Ang:	28.0°	28.0°	28.0°	28.0°
Look:	Right	St rng (ft):	16339	16339	16339	16339
Depr Ang:	25.0°	Near Rng Dep:	37.6°	37.6°	37.6°	37.6°
Des. trk:	276.0°	Far Rng Dep:	17.9°	17.9°	17.9°	17.9°
Start Sq:	90.0°	Atten (dB):	54.0	54.0	54.0	63.0
End Sq:	90.0°	RMS Video (%FS)	32.2	14.4	22.3	19.5

#### WAYPOINTS

	Latitude	Longitude
Line_up:	N 46:39.64	W 68:04.86
Start:	N 46:40.93	W 68:22.18
End:	N 46:41.98	W 68:36.64
From:	N 42:35.36	W 45:46.22
To:	N 45:52.64	W 92:35.19

Main Target: CALCS  
Mocomp Point:  
Lat: N 46:44.29  
Long: W 68:28.98  
Tgt Trk: 0.0 Tgt Vel: 1.0  
Alt: 802.0 ft

#### RADAR PARAMETERS - for UWB

RTP Channel: 1  
Resolution: N/A  
Swath width: Single  
RMS Time Constant: 2^7  
Position Reference: ON  
Atten. Tracking: OFF  
Range Gate Delta: 0.0 ft  
Azimuth Presum Rate: Presum6  
TX Chirp Filename: CTL2U1A

Filter damping is Hi -> 10 sec  
PRF Factor is FAST (262.5 kts) -  
Ave Gndspd: Real -> 250.5 kts  
Mocomp Off for Chnl 1, 2, 3, 4  
GPS Vel/Pos Reference  
Adj Gnd Scene: 5000.0 ft  
Range Tracking is OFF  
Clutterlock Reference: OFF  
RX Chirp Filename: CRL2N0A

Ave Ref Vel -> -.9 fps (s.d.= 1.3)  
Ave Fil Vel -> -2.2 fps (s.d.= 1.0)

NML XMIT PWR  
X: -70.0  
L: -70.0  
C: -70.0  
P: 44.7

ANT BIAS  
Elevation: 0.0°  
Azimuth: 0.0°  
Pitch: 0.0°

Tape Footage Drive no.  
Starting: 200 ft (1)  
Ending: 1439 ft (1)

Vel Bias CAL Atten  
X: 1035.0 X: 63.8 dB  
Y: -433.0 L: 63.8 dB  
Z: 6697.0 C: 63.8 dB

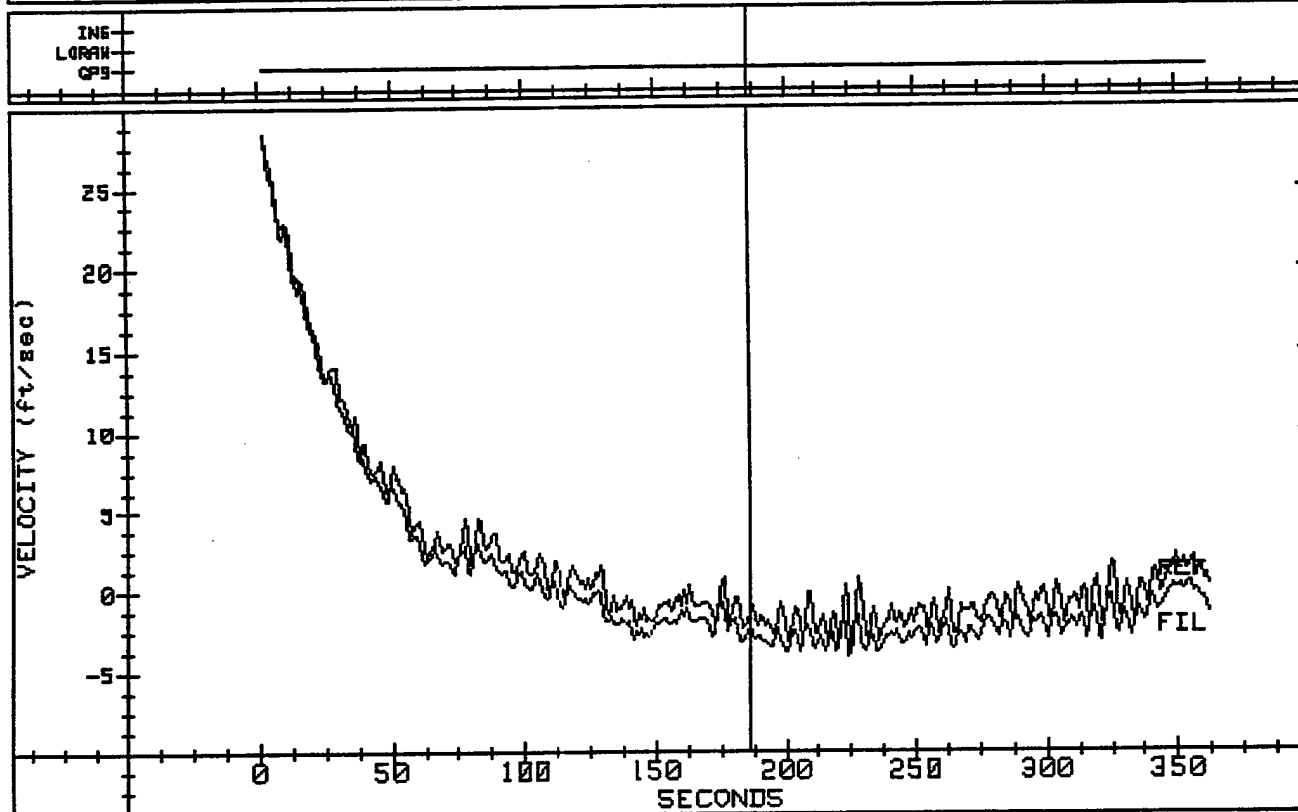
LINE Map Time (UCT)  
Start: 00:44:17  
End: 00:46:58

#### Mocomp Counters

Start: 1020406 000F91F6h  
End: 1047407 000FFB6Fh

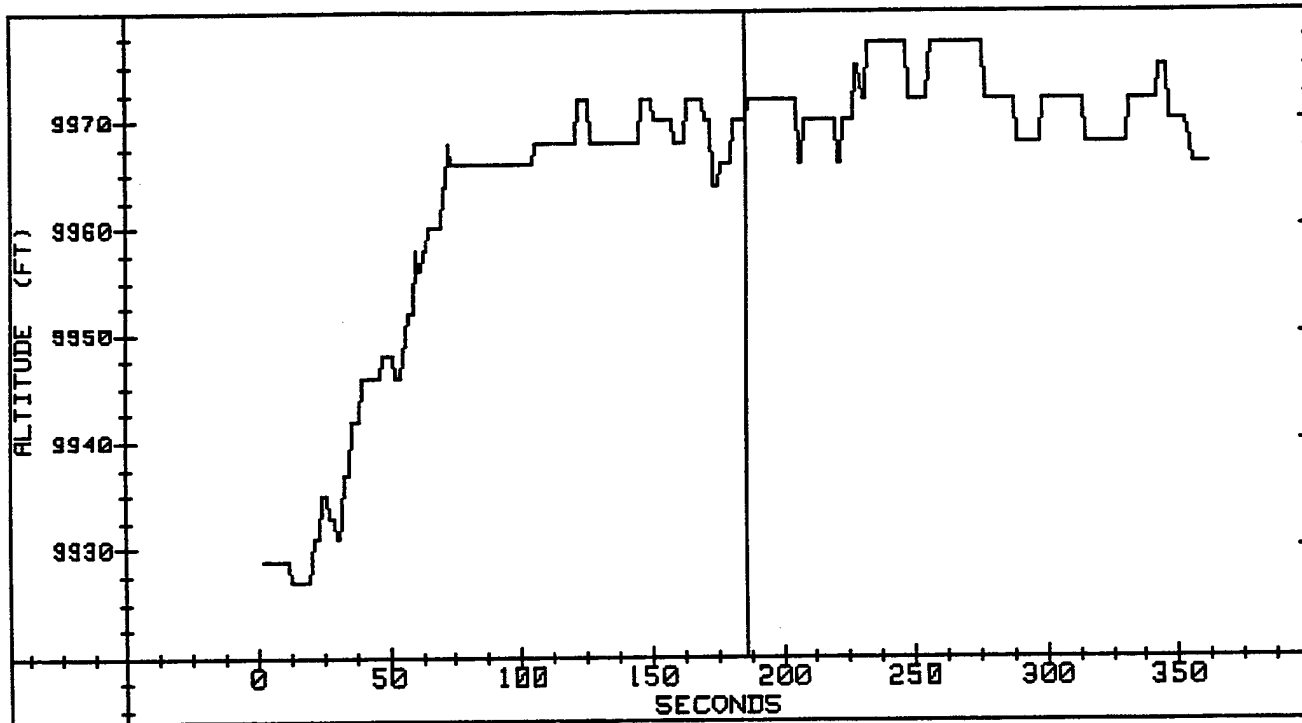
CPA (UCT): 00:00:00  
Alt: 0 ft (GPS)  
Lat: N 0:00: 0  
Lon: E 0:00: 0

FILTERED vs. REF. VELOCITY  
DAY 178 TIME 0:40 PASS 17



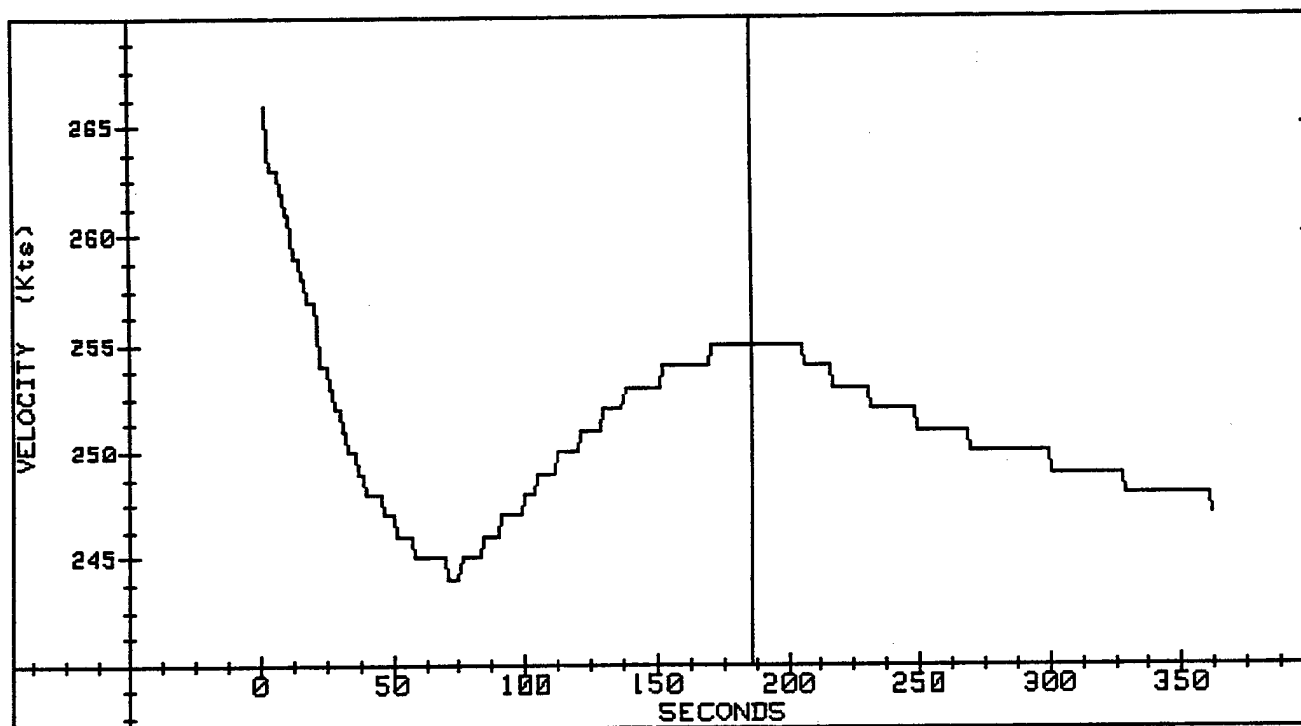
BARO ALTITUDE

DAY 178 TIME 0:40 PASS 17 m= 9972, sd= 3.40005



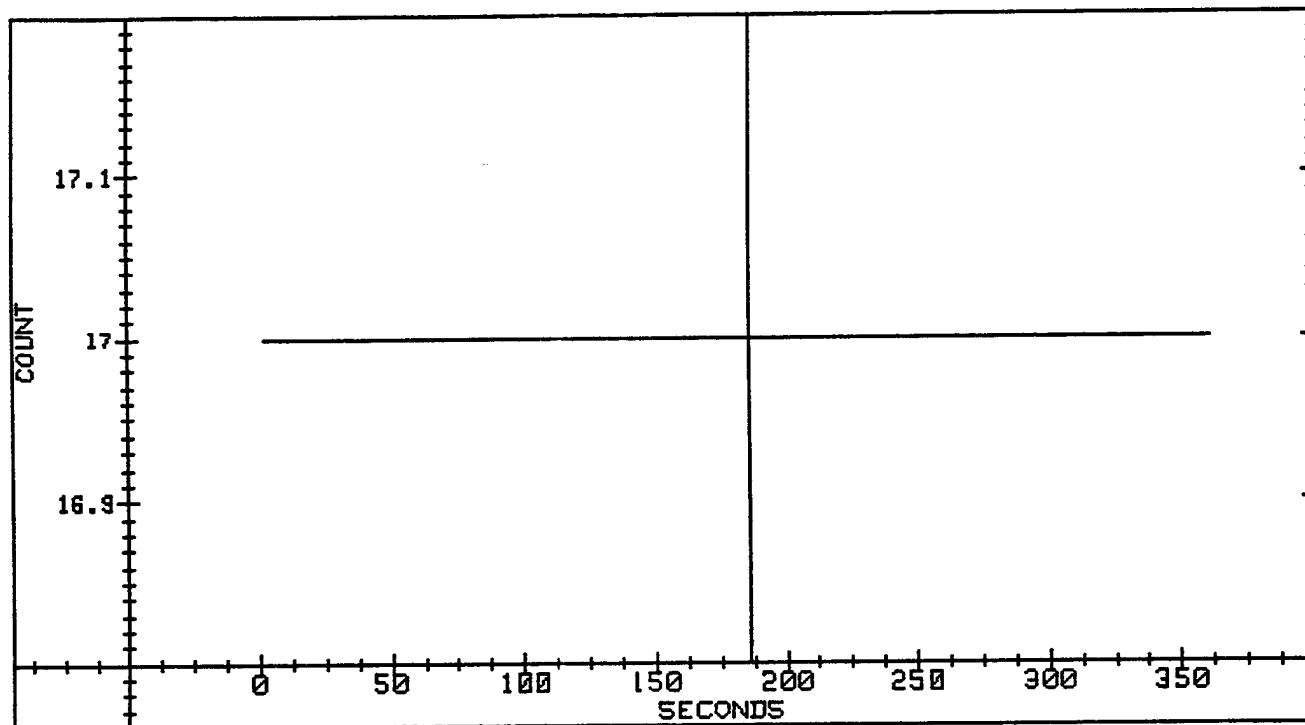
# INS GROUND SPEED

DRY 178 TIME 0:40 PASS 17 m= 250.5, sd= 2.04619



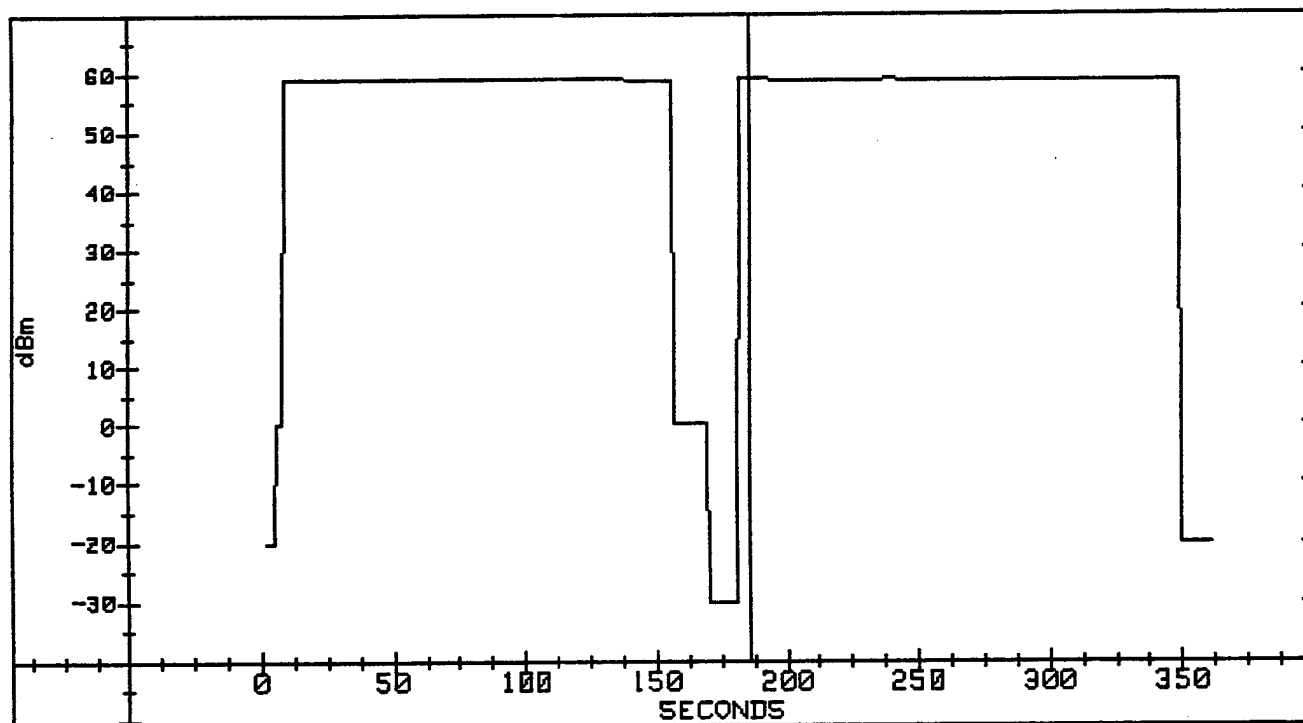
# PASS NUMBER

DAY 170 TIME 0:40 PASS 17 m= 17. sd= 0



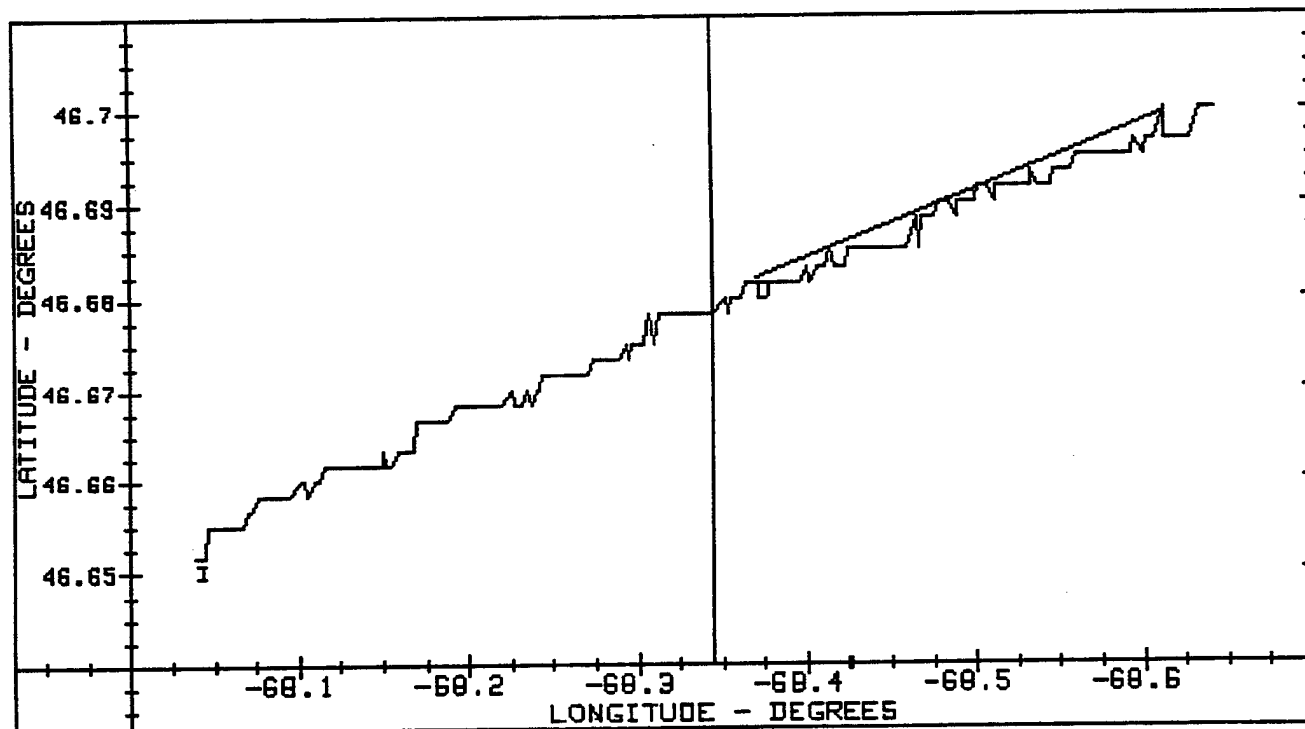
P Band Power

DAY 178 TIME 0:40 PASS 17 m= 52.97, sd= 20.6379



INS AIRCRAFT POSITION

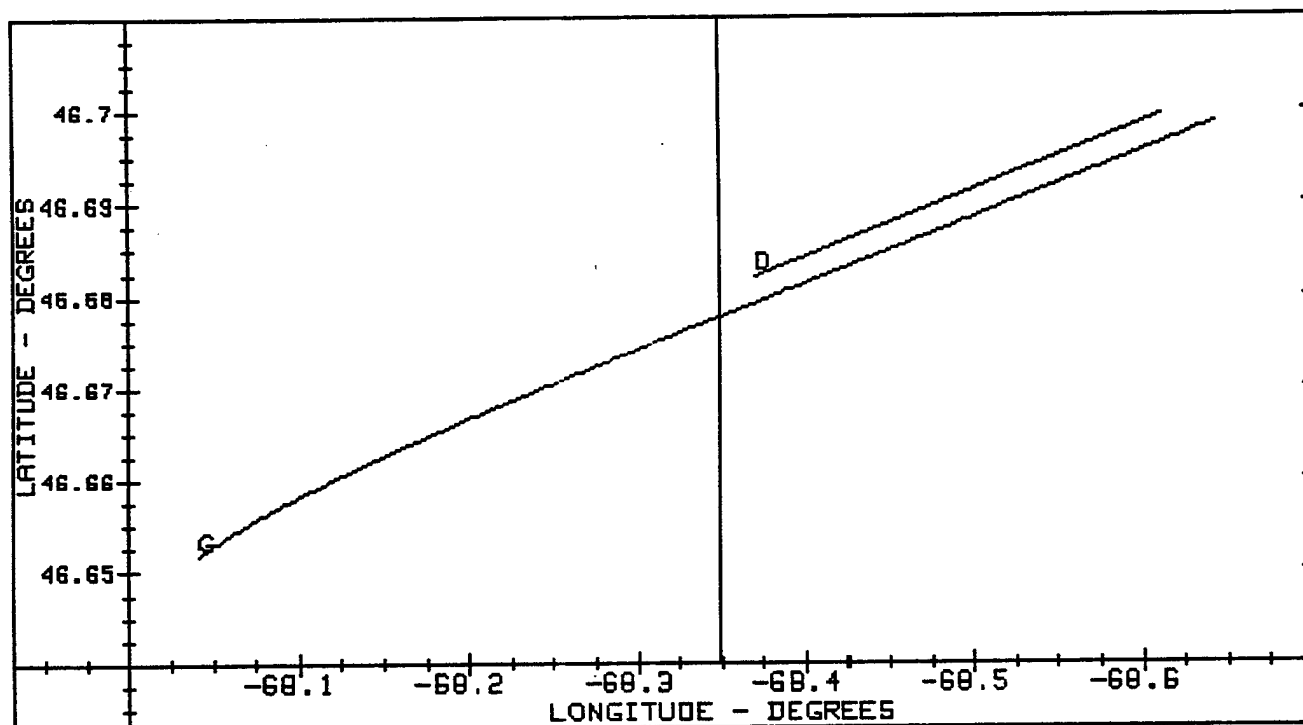
DAY 178 TIME 0:40 PASS 17





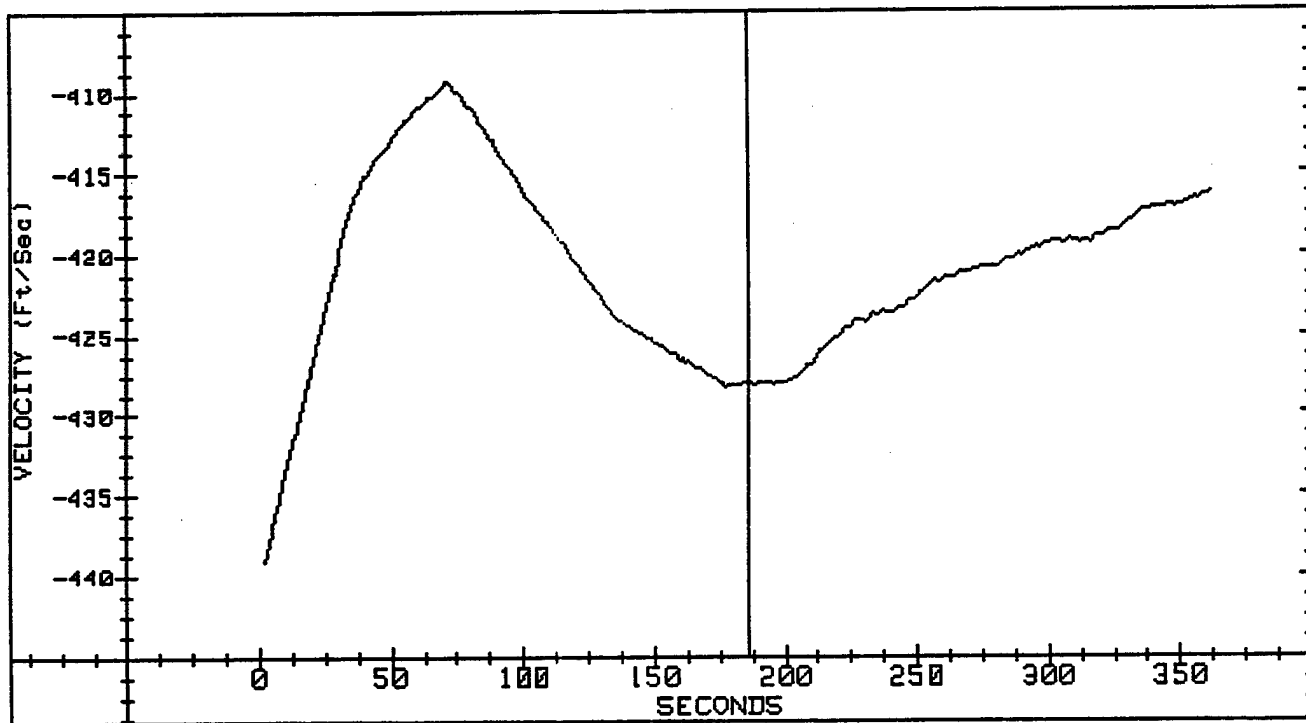
GPS AIRCRAFT POSITION

DAY 170 TIME 0:40 PASS 17



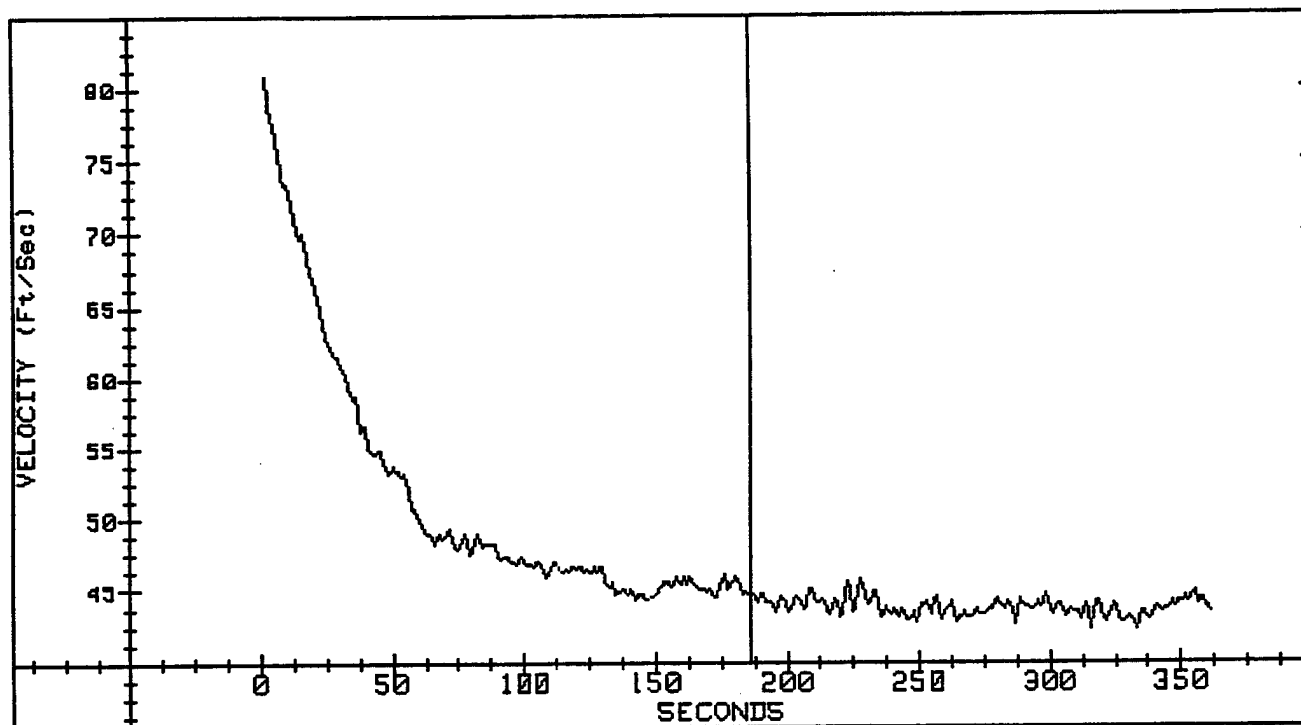
GPS V<sub>e</sub>

DAY 170 TIME 0:40 PASS 17 m= -421, sd= 3.13205



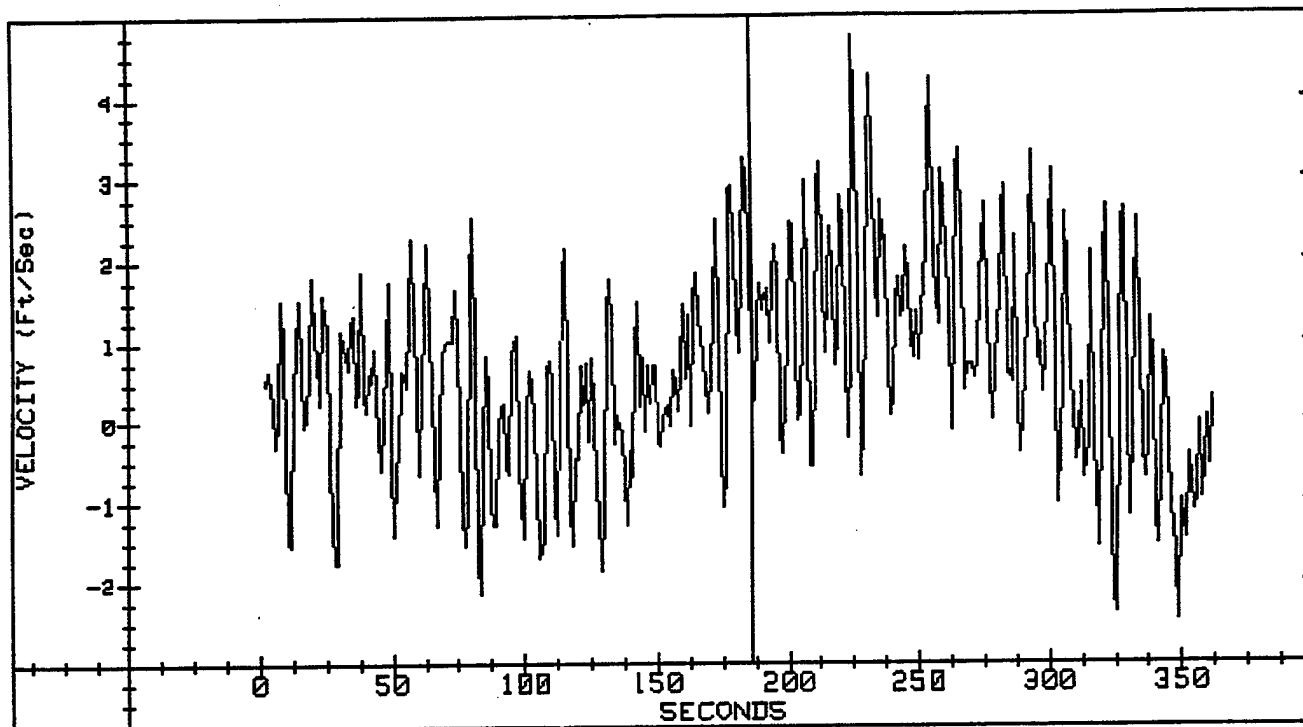
GPS Vn

DAY 178 TIME 0:40 PRSS 17 m= 43.77, sd= .606984



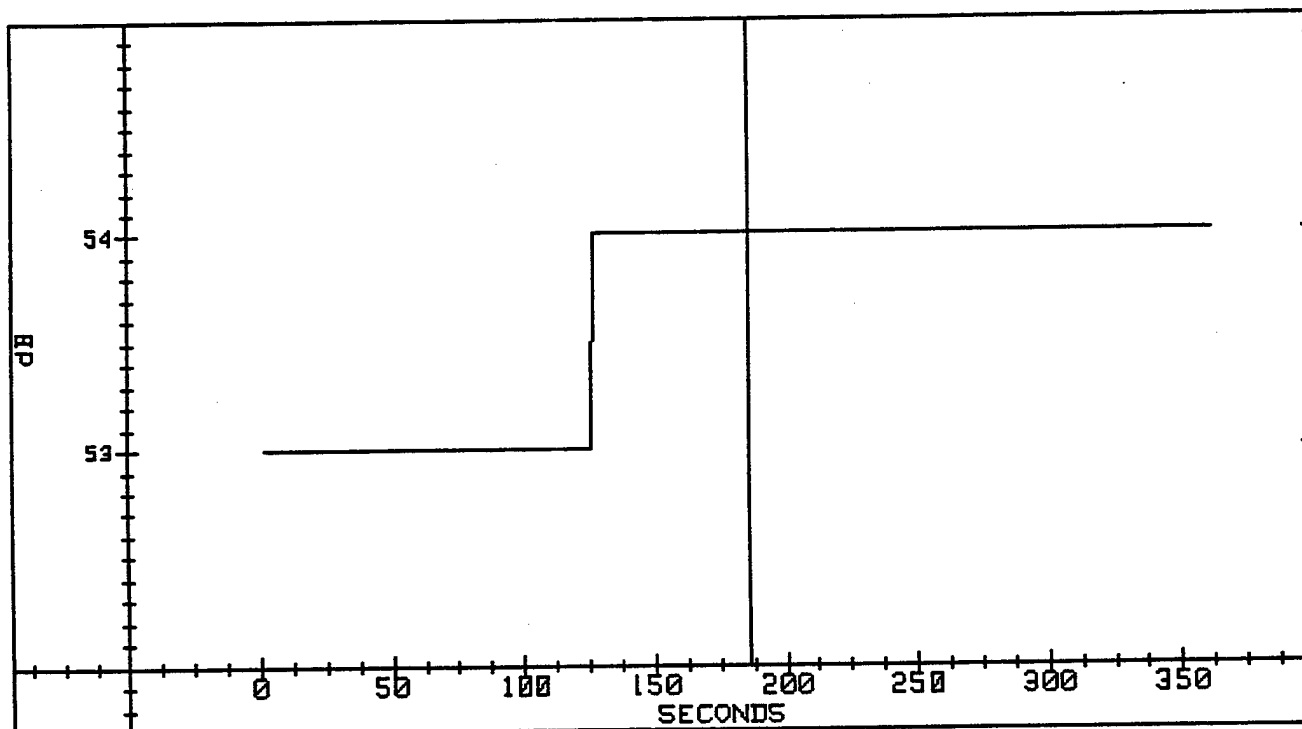
GPS Vv

DRY 178 TIME 0:40 PASS 17 m= .9489, sd= 1.43188



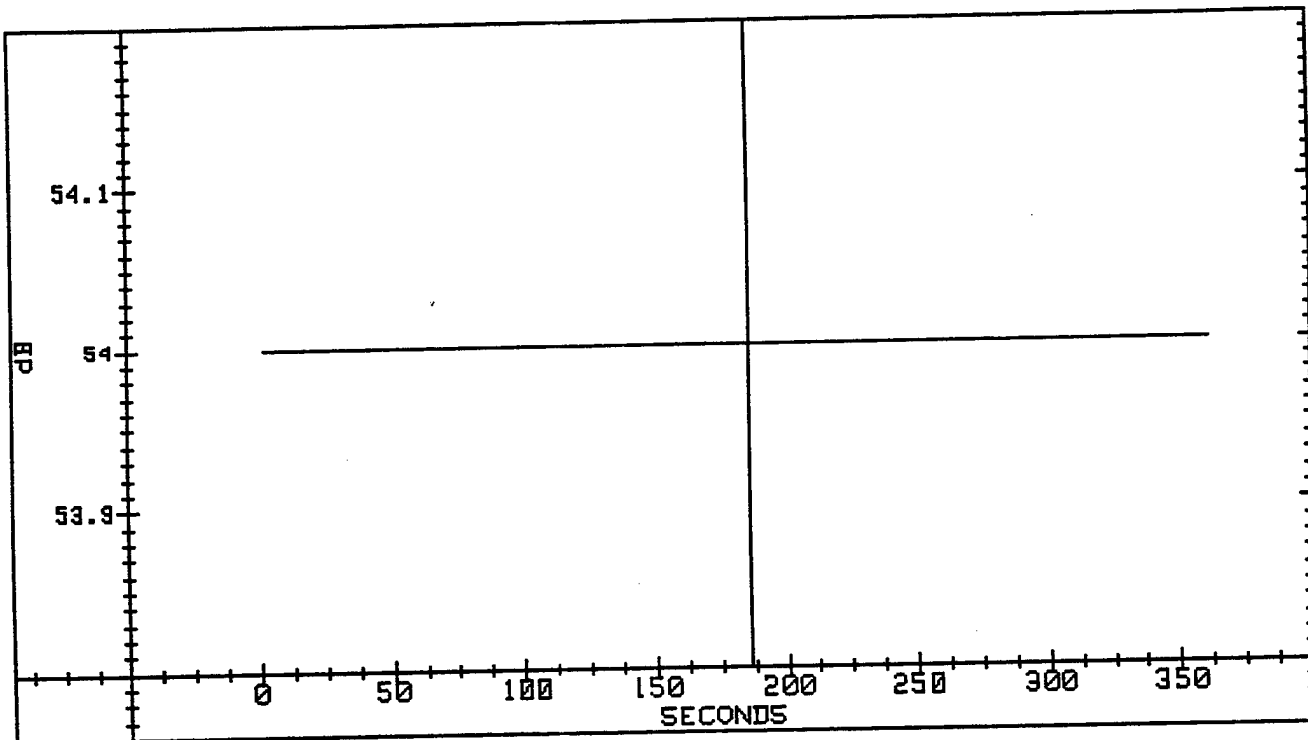
Ch1 RES Attenuation

DAY 170 TIME 0:40 PASS 17 m= 54, sd= 0



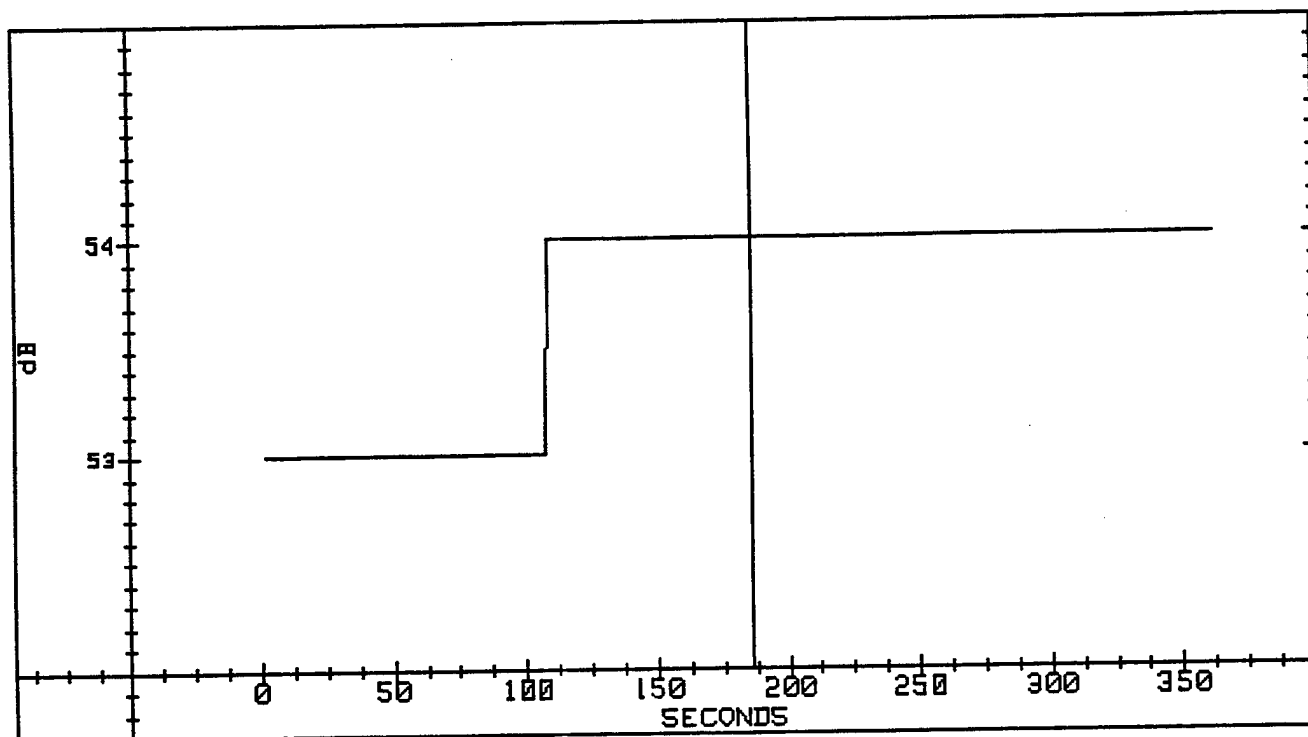
Ch2 RES Attenuation

DAY 170 TIME 0:40 PASS 17 m= 54, sd= 0



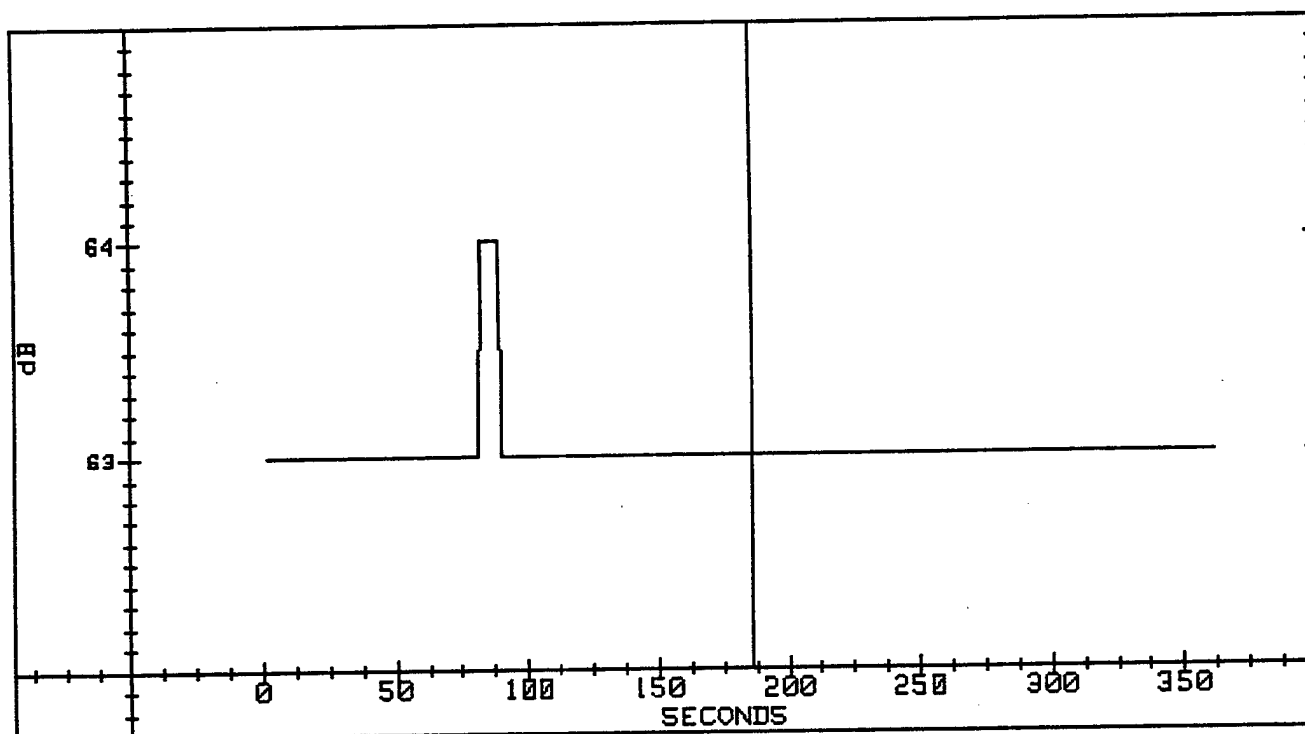
Ch3 RES Attenuation

DAY 178 TIME 0:40 PASS 17 m= 54, sd= 0



Ch4 RES Attenuation

DAY 178 TIME 0:40 PASS 17 m= 63, sd= 0





# GPS ALTITUDE

MEAN= 10139.1 STANDARD DEVIATION= 54.0109

DATE: June 26, 1995 PASS 17

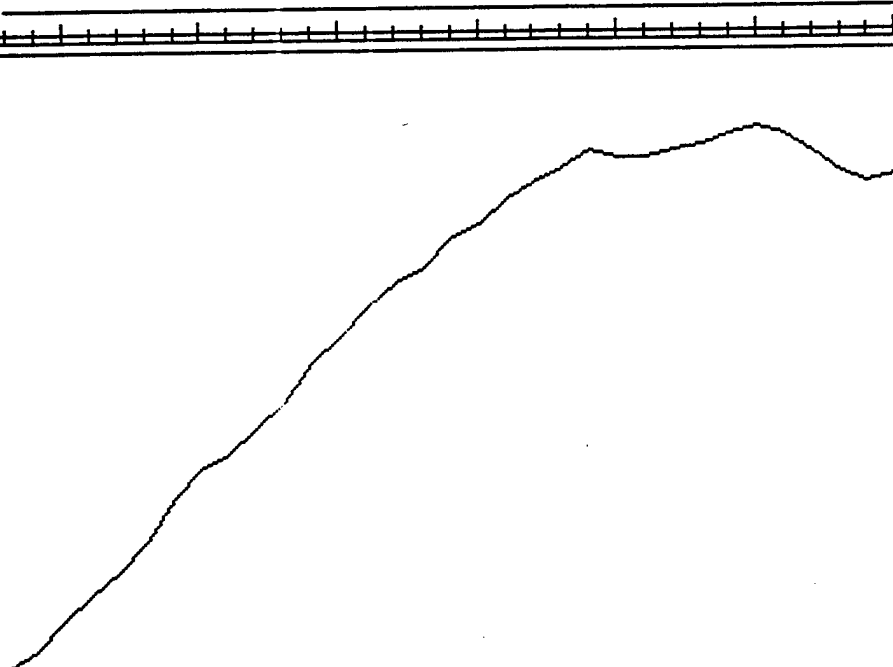
OFF  
ON  
BAR

10200  
10180  
10160  
10140  
10120  
10100  
10080  
10060  
10040

FEET

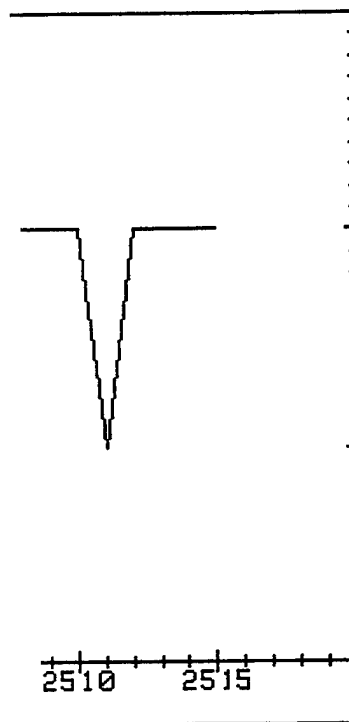
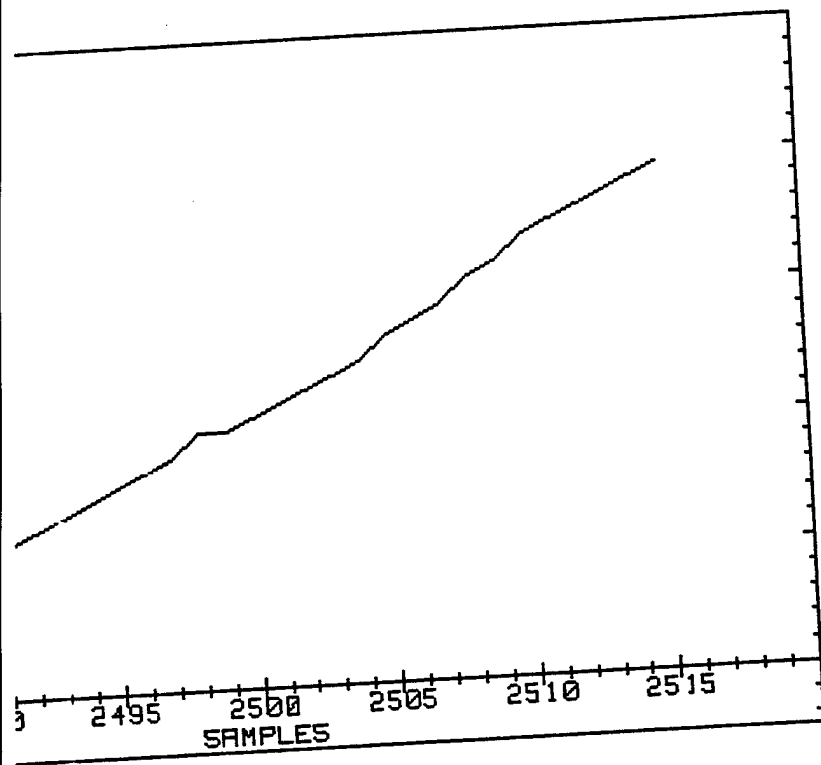
2485 2490 2495 2500 2505 2510 2515

SAMPLES

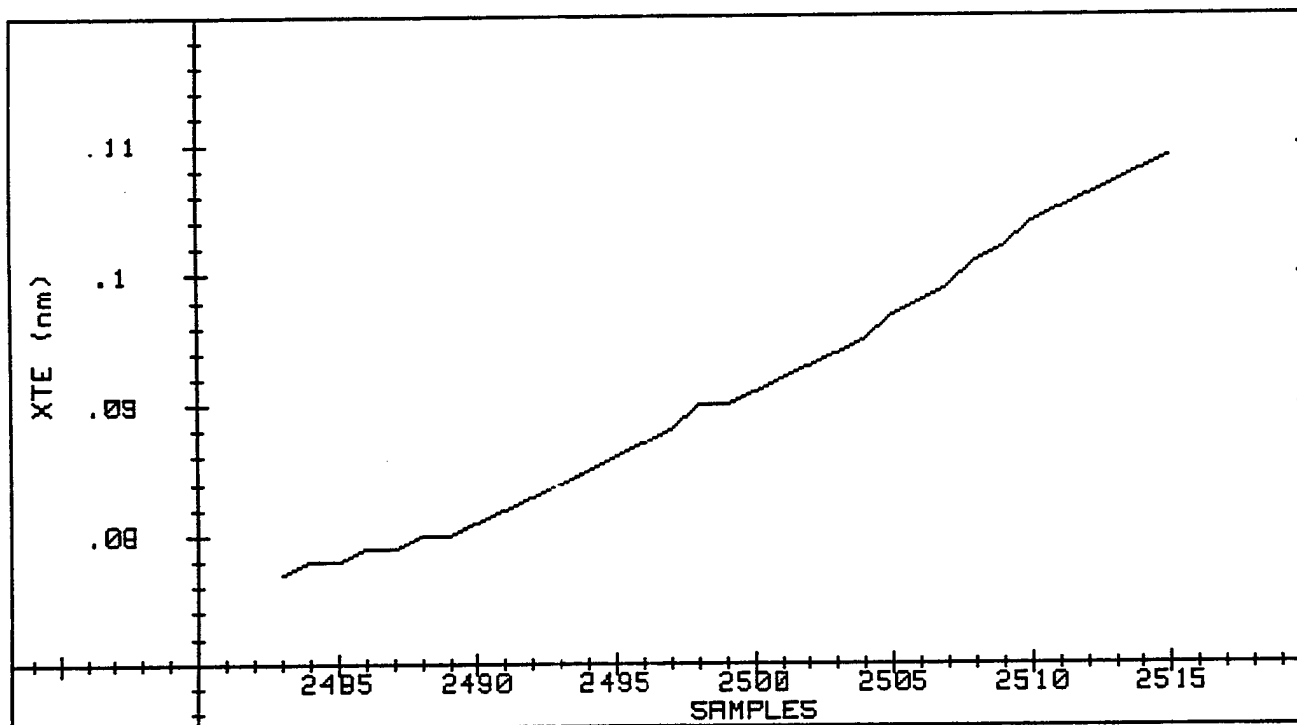


Cross Track Error  
STANDARD DEVIATION= .0100064  
ine 26, 1995 PASS 17

8505

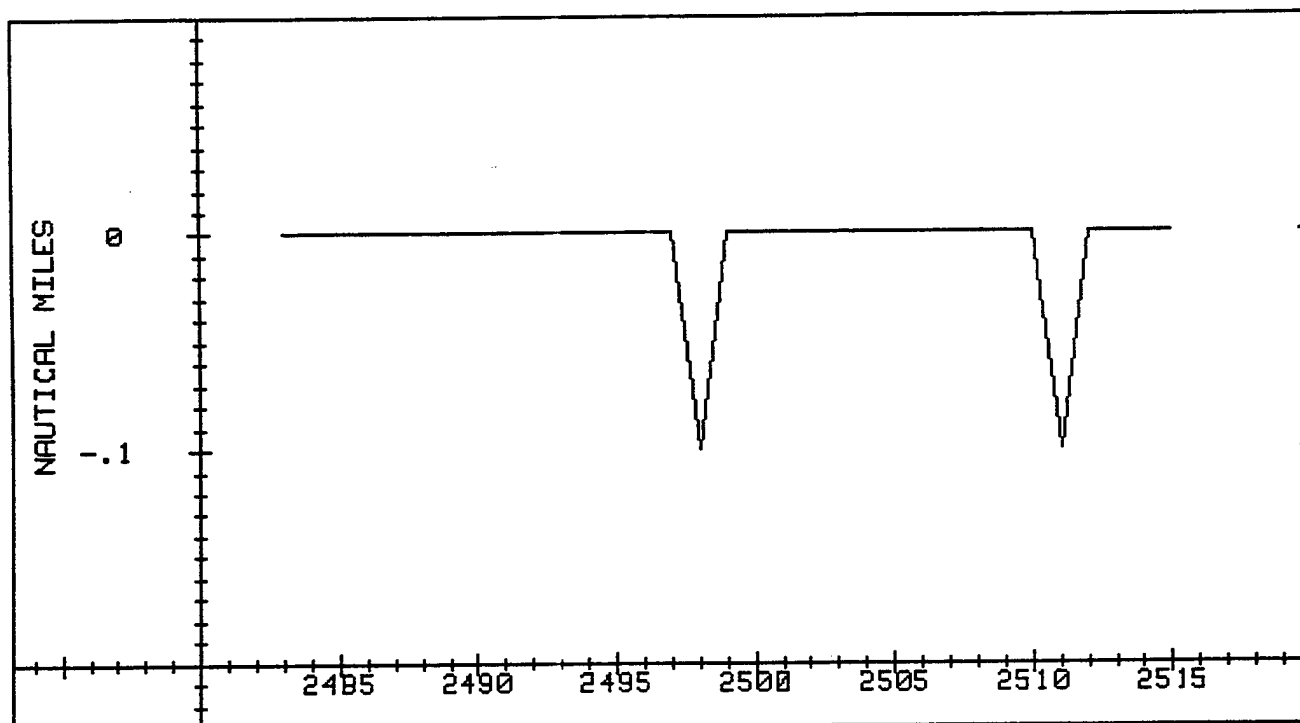


GPS Cross Track Error  
MEAN= .0811515    STANDARD DEVIATION= .0100054  
DATE: June 26, 1995    PASS 17

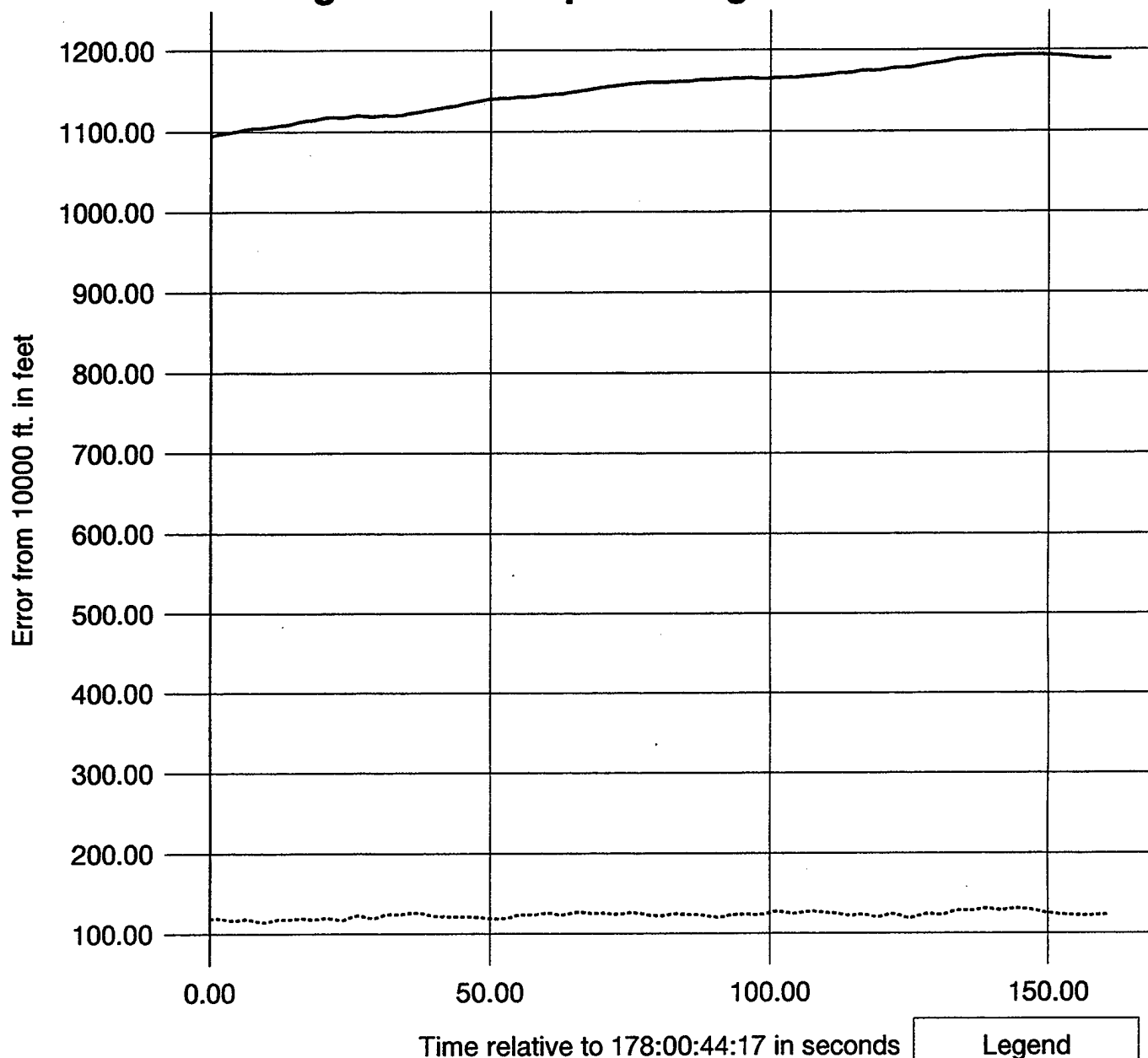


INS CROSS TRACK ERROR

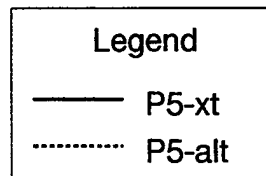
MEAN- -.00606061      STANDARD DEVIATION- .0238606  
DATE: June 28, 1995      PASS 17



# Portage, ME - June 26, 1995 - Pass 17 - Xtk. and Alt. Errors Higher alt. and port are greater than zero



	Mean	St. Dev.
ALT.	123.13	3.40
XTK.	1153.63	28.92



27 Jun 1995  
Tape: E1423

Post-line Data Sheet  
Line 33  
Mission: PORTAGE MAINE, DAY

Time: 178:01:01:46  
Pass 18  
Req.# 18

#### AIRCRAFT & CHANNEL DATA

Altitude			CH 1	CH 2	CH 3	CH 4
Desired:	7000 ft	Wave/Pol.:	p-VV	p-VH	p-HV	p-HH
Baro:	6834 ft s.d.=	8 Swath Ctr Ang:	20.0°	20.0°	20.0°	20.0°
Slt. rng:	18537 ft	Tgt Dep Ang:	20.0°	20.0°	20.0°	20.0°
Look:	Right	St rng (ft):	17001	17001	17001	17001
Depr Ang:	25.0°	Near Rng Dep:	23.7°	23.7°	23.7°	23.7°
Des. trk:	276.0°	Far Rng Dep:	11.9°	11.9°	11.9°	11.9°
Start Sq:	90.0°	Atten (dB):	54.0	52.0	54.0	63.0
End Sq:	90.0°	RMS Video (%FS)	18.2	26.4	13.8	27.8

#### WAYPOINTS

	Latitude	Longitude
Line up:	N 46:40.30	W 68:06.18
Start:	N 46:41.59	W 68:23.50
End:	N 46:42.64	W 68:37.97
From:	N 42:35.97	W 45:47.31
To:	N 45:53.24	W 92:36.79

Main Target: SIG  
Mocomp Point:  
Lat: N 46:44.97  
Long: W 68:30.30  
Tgt Trk: 0.0 Tgt Vel: 0.0  
Alt: 660.0 ft

#### RADAR PARAMETERS - for UWB

RTP Channel: 1  
Resolution: N/A  
Swath width: Single  
RMS Time Constant: 2^7  
Position Reference: ON  
Atten. Tracking: OFF  
Range Gate Delta: 0.0 ft  
Azimuth Presum Rate: Presum6  
TX Chirp Filename: CTL1U2B

Filter damping is Hi -> 10 sec  
PRF Factor is FAST (262.5 kts)  
Ave Gndspd: Real -> 254.1 kts  
Mocomp Off for Chnl 1, 2, 3, 4  
GPS Vel/Pos Reference  
Adj Gnd Scene: 5000.0 ft  
Range Tracking is OFF  
Clutterlock Reference: OFF  
RX Chirp Filename: CRL1N0A

Ave Ref Vel -> -5.8 fps (s.d.= 12.8)  
Ave Fil Vel -> -7.2 fps (s.d.= 12.4)

NML XMIT PWR  
X: -70.0  
L: -70.0  
C: -70.0  
P: 47.1

ANT BIAS  
Elevation: 0.0°  
Azimuth: 0.0°  
Pitch: 0.0°

Tape Footage Drive no.  
Starting: 1454 ft (1)  
Ending: 2679 ft (1)

Vel Bias CAL Atten  
X: 1035.0 X: 63.8 dB  
Y: -433.0 L: 63.8 dB  
Z: 6697.0 C: 63.8 dB

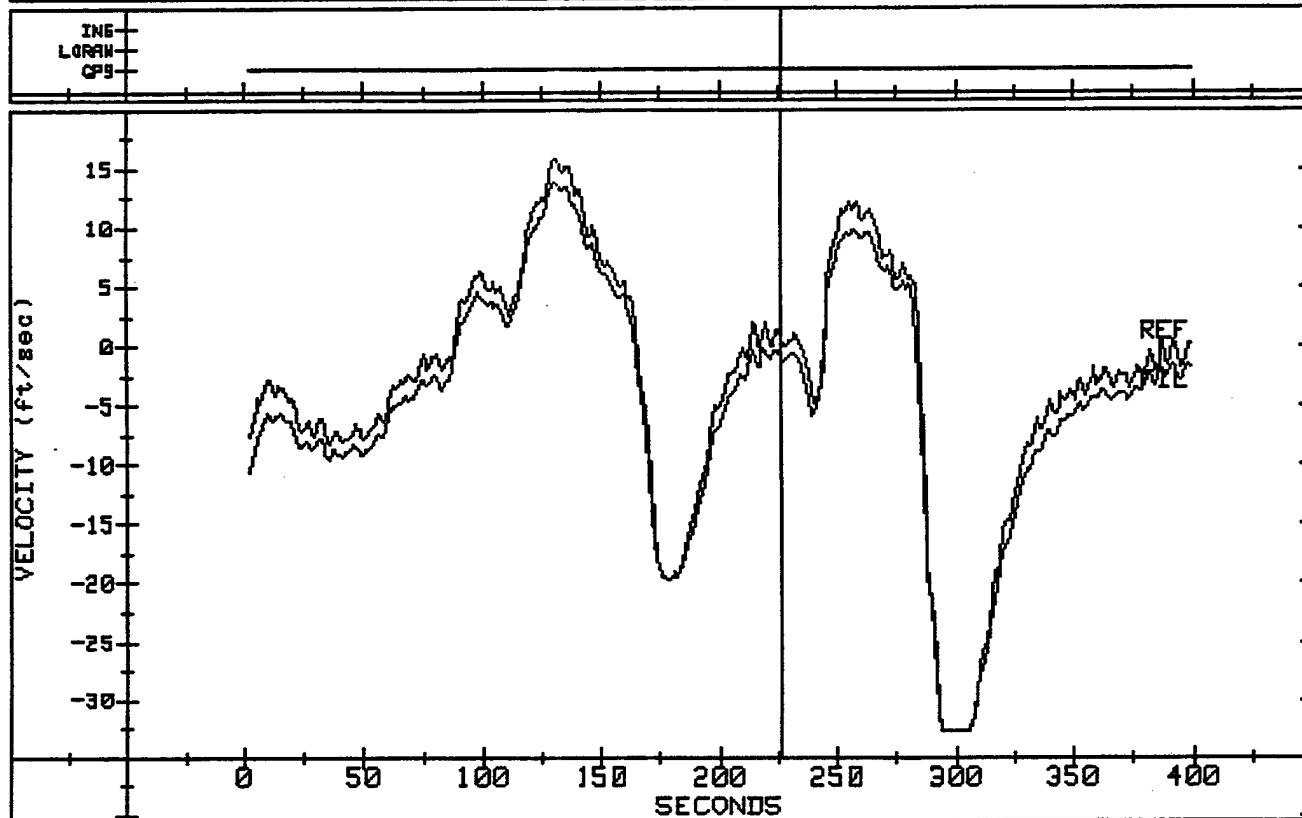
LINE Map Time (UCT)  
Start: 01:01:46  
End: 01:04:24

#### Mocomp Counters

Start: 1087785 00109929h  
End: 1114252 0011008Ch

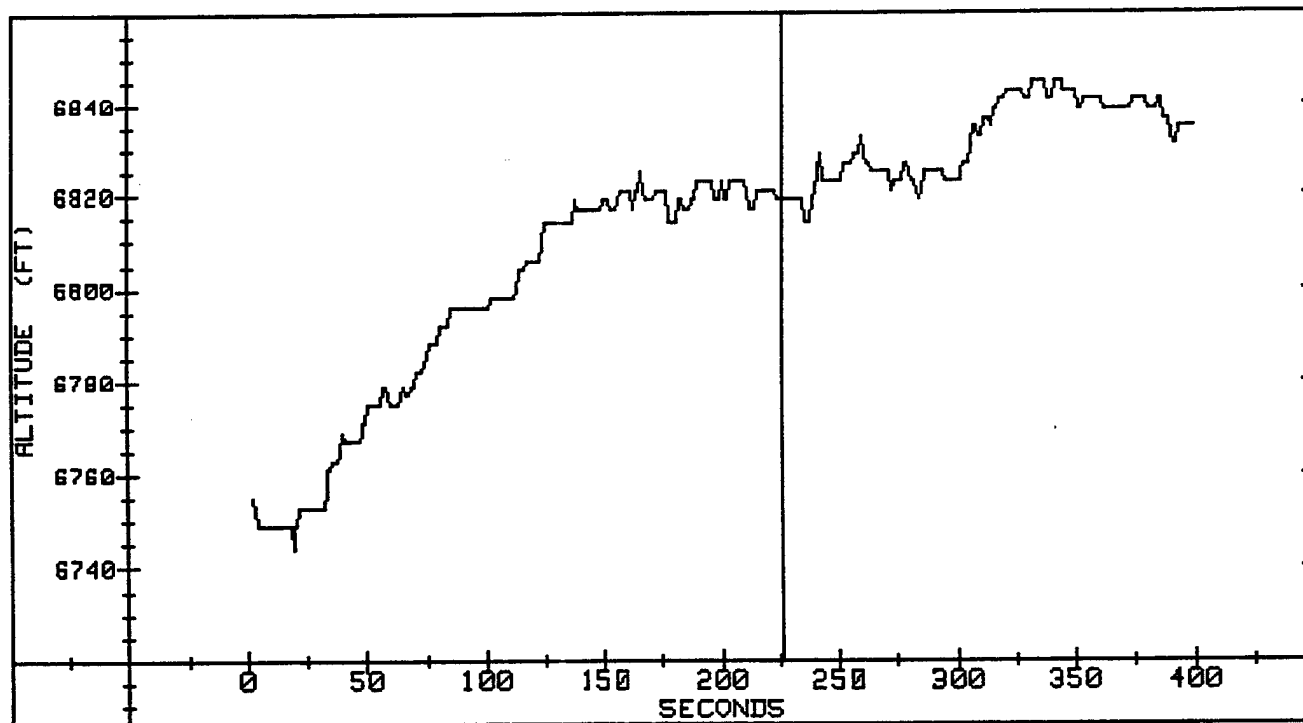
CPA (UCT): 00:00:00  
Alt: 0 ft (GPS)  
Lat: N 0:00: 0  
Lon: E 0:00: 0

FILTERED vs. REF. VELOCITY  
DAY 170 TIME 0:57 PASS 10



BARO ALTITUDE

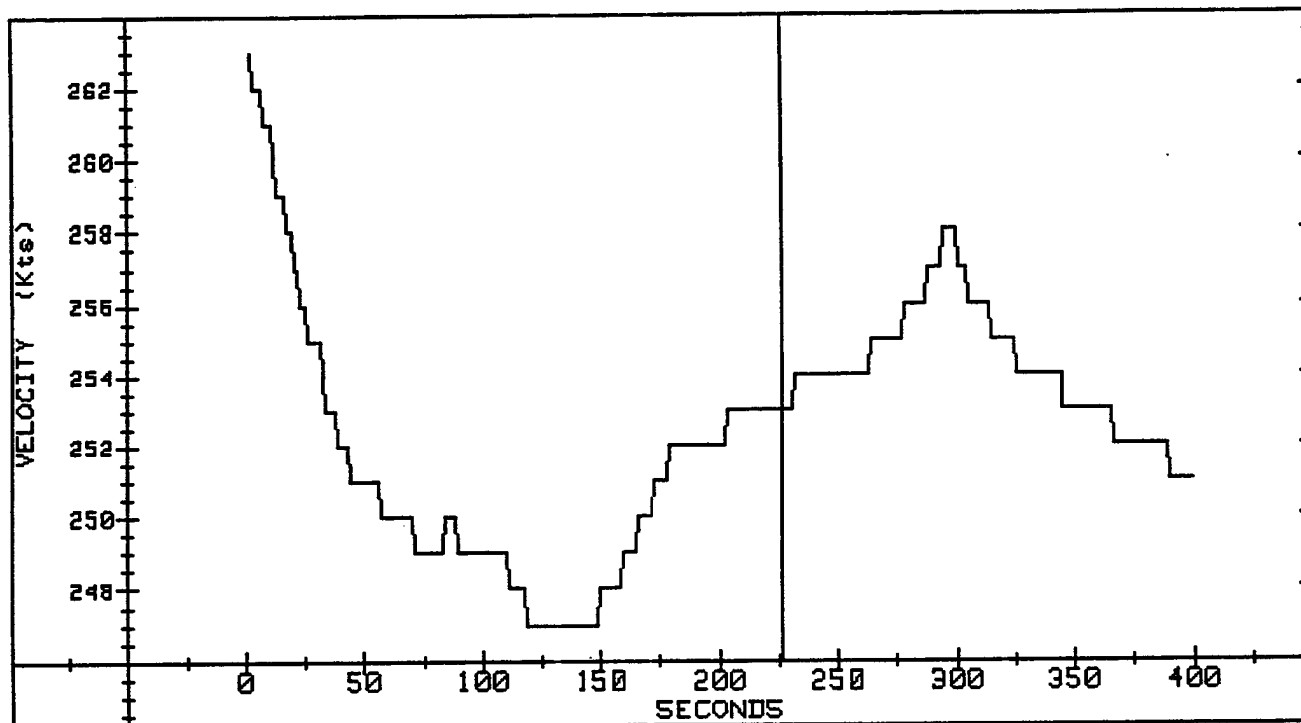
DAY 178 TIME 0:57 PAGE 18 m= 6034, sd= 7.92998





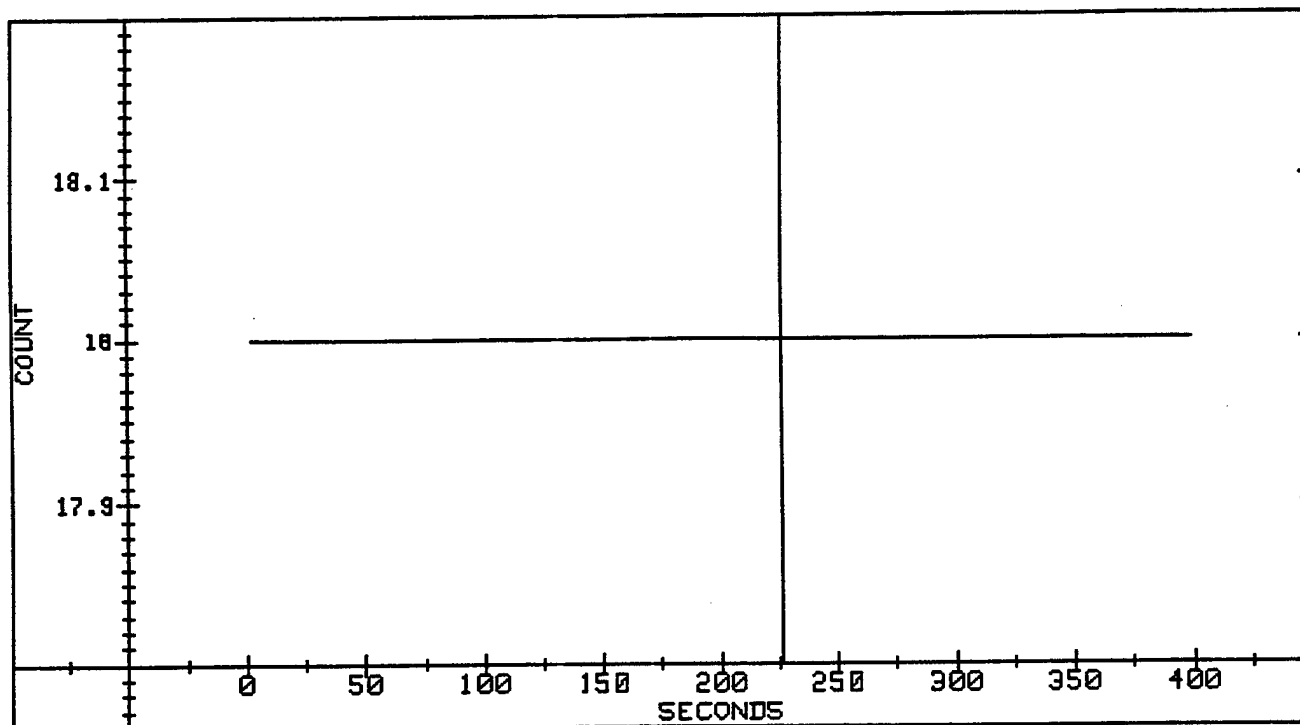
# INS GROUND SPEED

DRY 178 TIME 0:57 PASS 18 m= 254.1, sd= 1.78200



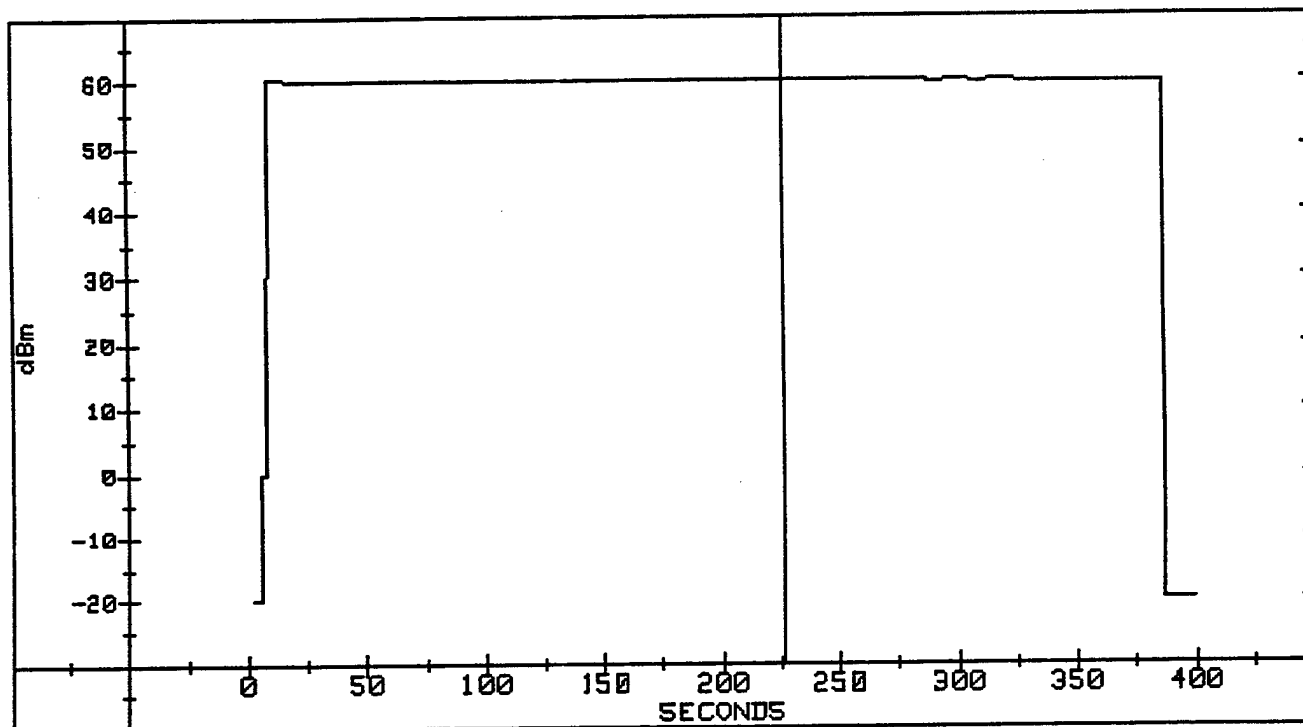
# PASS NUMBER

DAY 178 TIME 0:57 PASS 18 m= 18. sd= 0



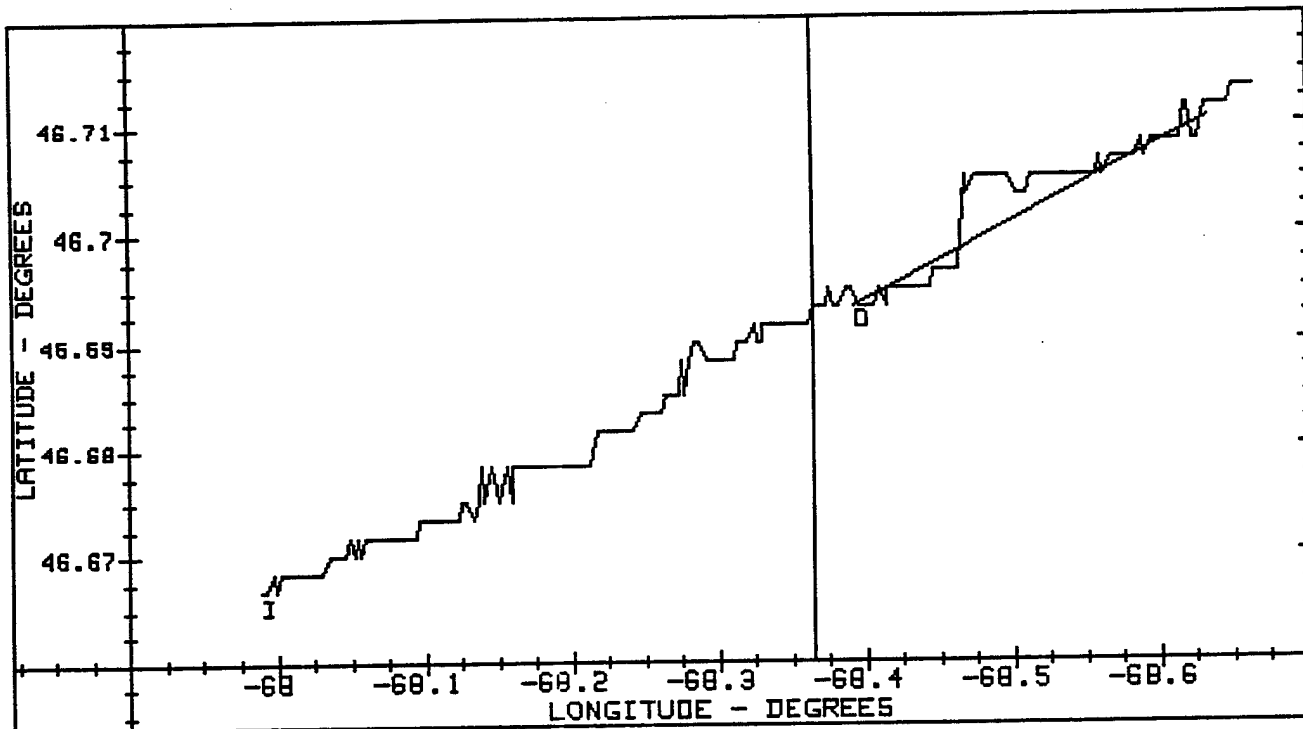
P Band Power

DRY 178 TIME 0:57 PASS 18 m= 53.32, sd= 21.8784



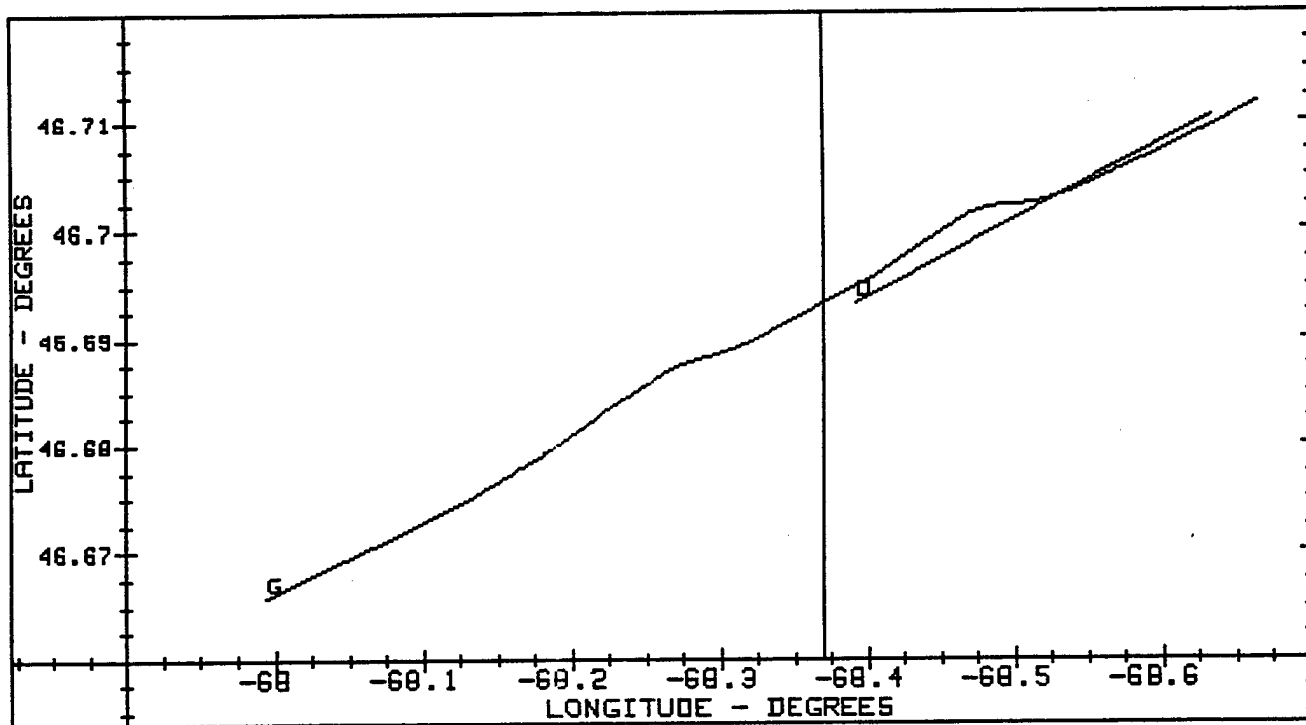
INS AIRCRAFT POSITION

DAY 170 TIME 0:57 PASS 10



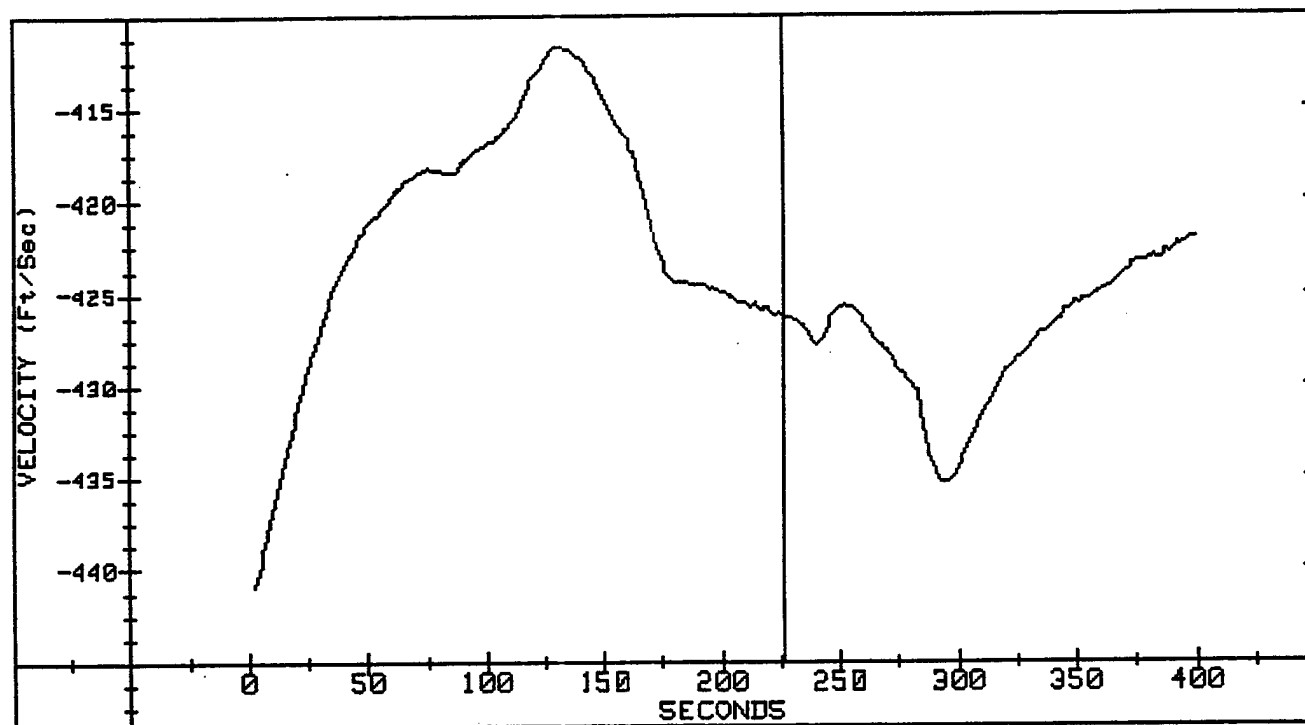
GPS AIRCRAFT POSITION

DAY 170 TIME 0:57 PASS 10



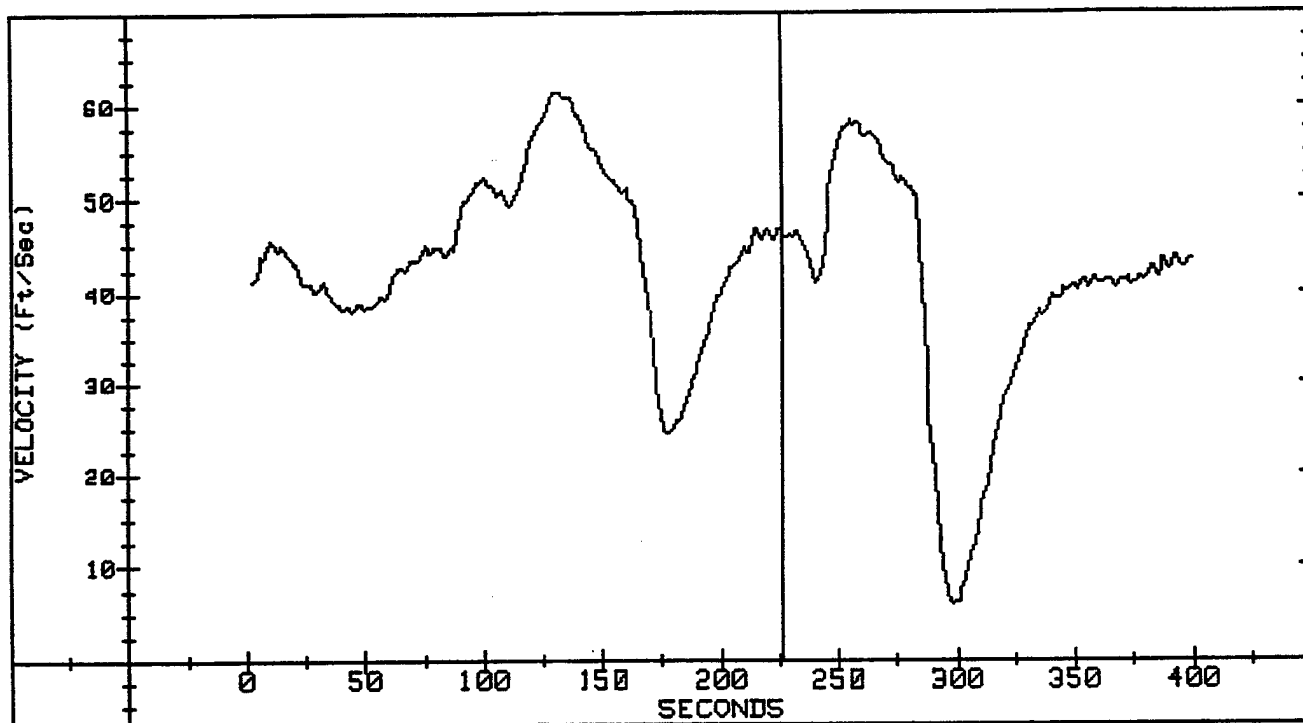
GPS V<sub>e</sub>

DAY 170 TIME 0:57 PASS 10 m= -427.5, sd= 3.63306



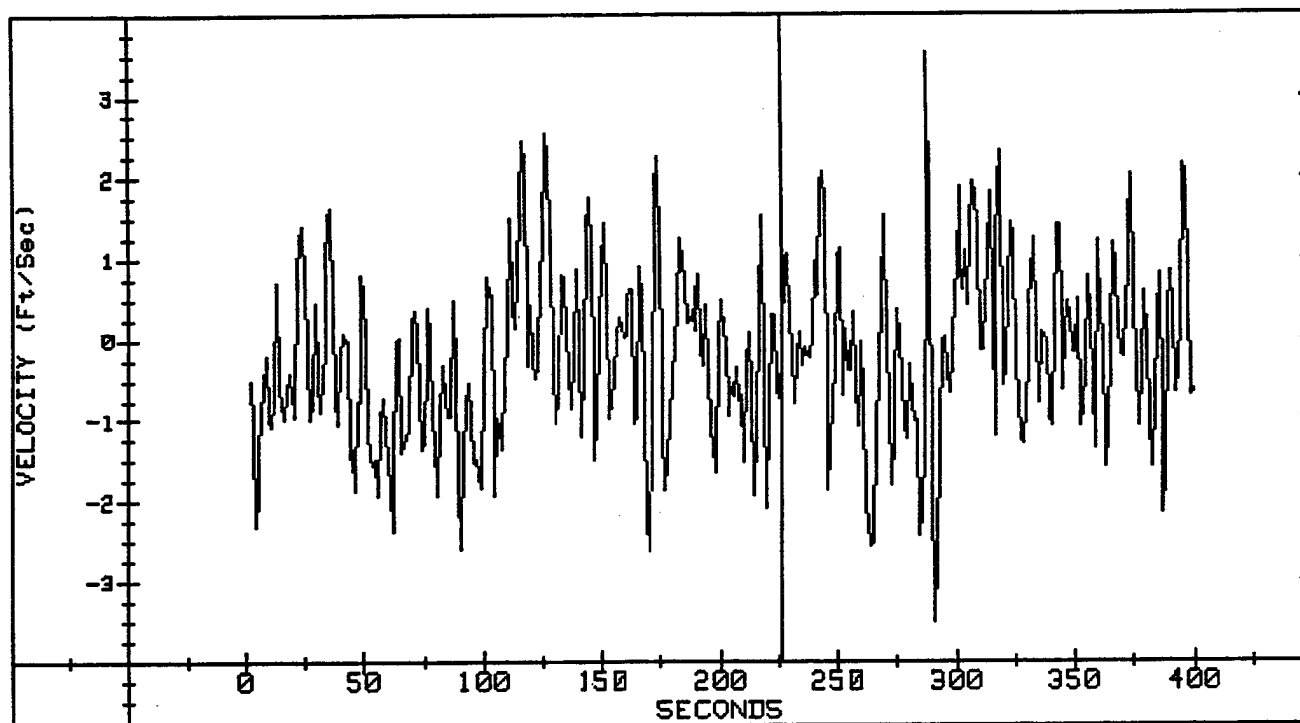
GPS Vn

DRY 178 TIME 0:57 PASS 18 m= 38.41, sd= 13.9816



GPS Vv

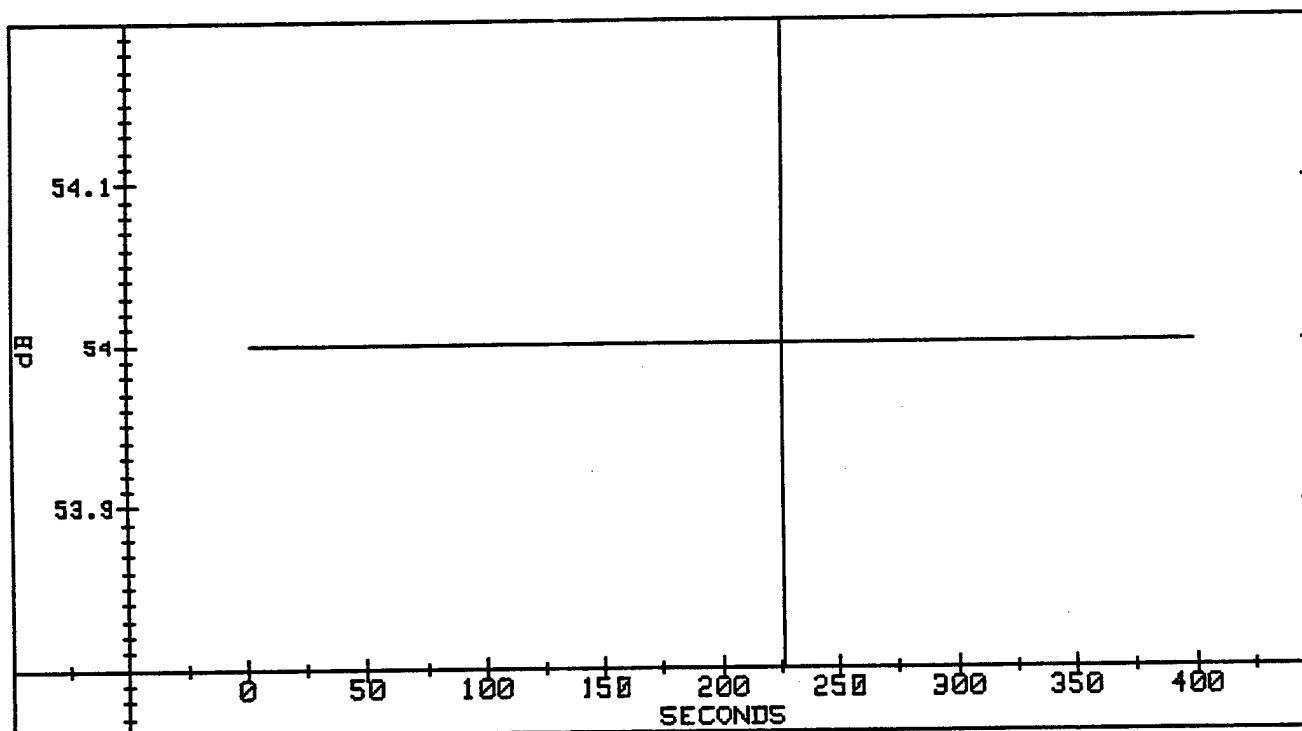
DAY 178 TIME 0:57 PASS 18 m= -.06643, sd= 1.16203





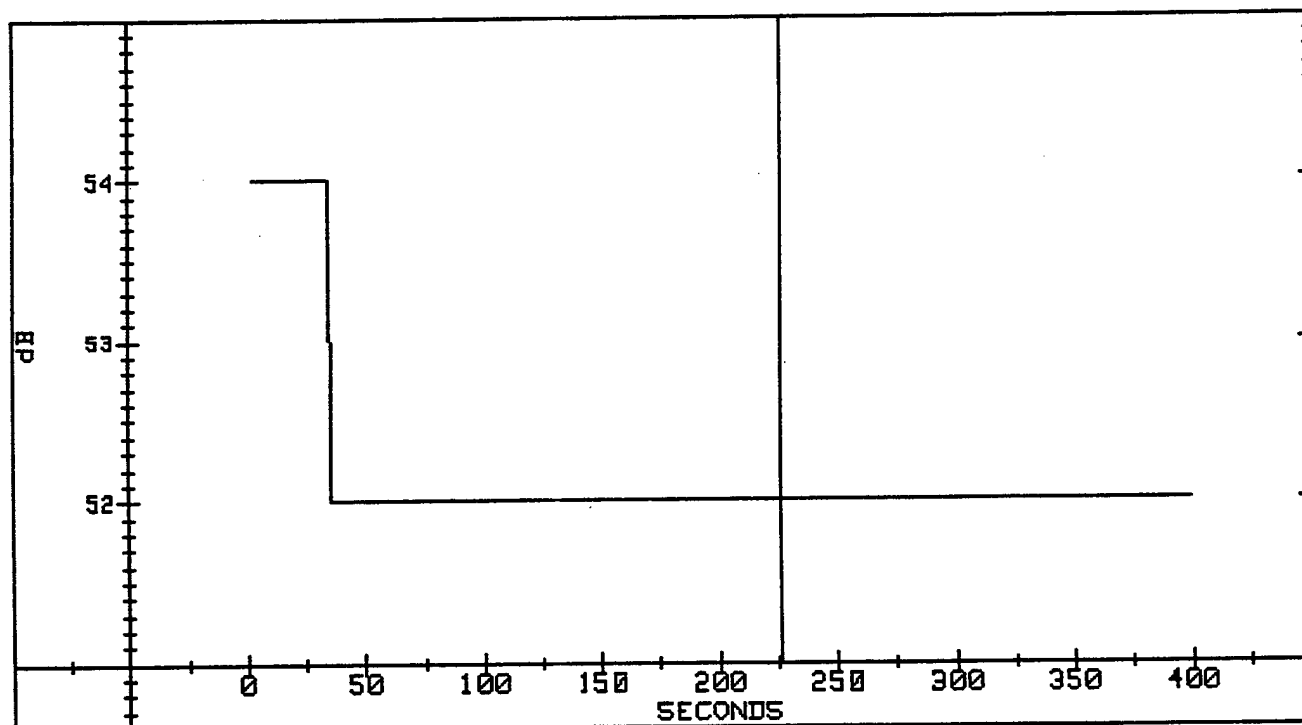
Ch1 RES Attenuation

DAY 179 TIME 0:57 PASS 10 m= 54, sd= 0



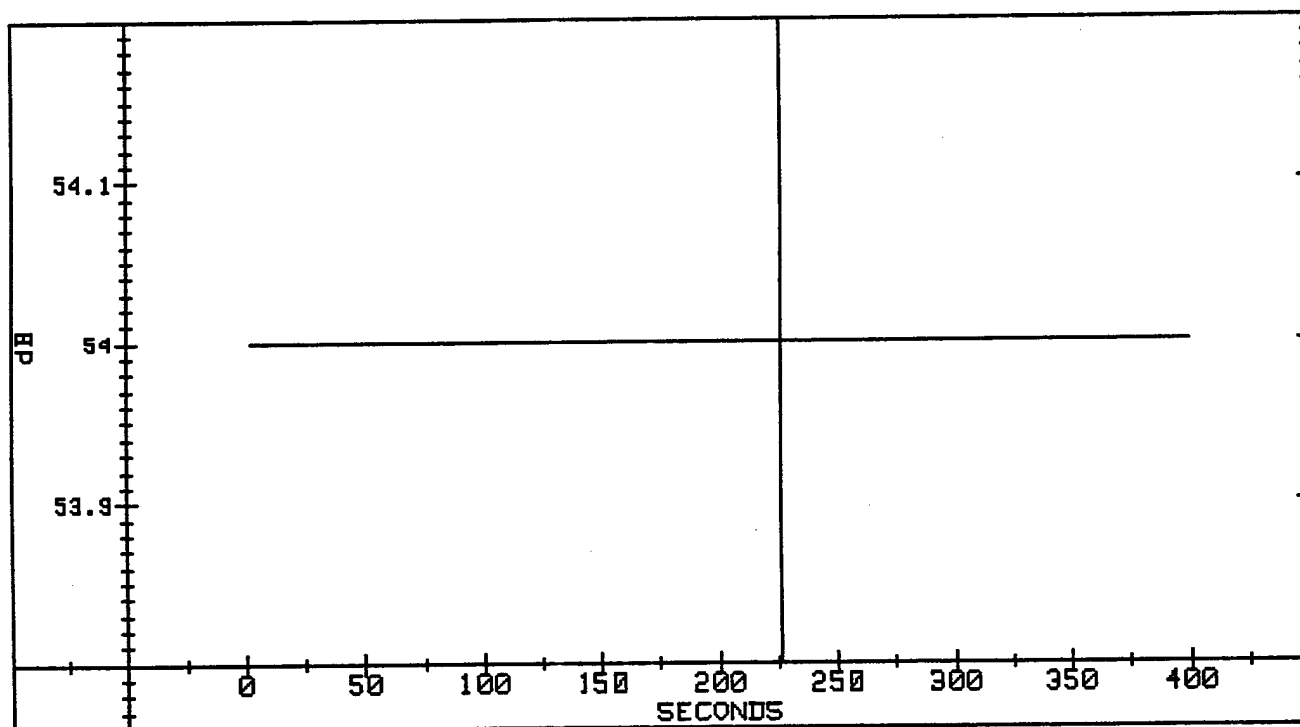
Ch2 RES Attenuation

DAY 178 TIME 0:57 PASS 18 m= 52, sd= 0



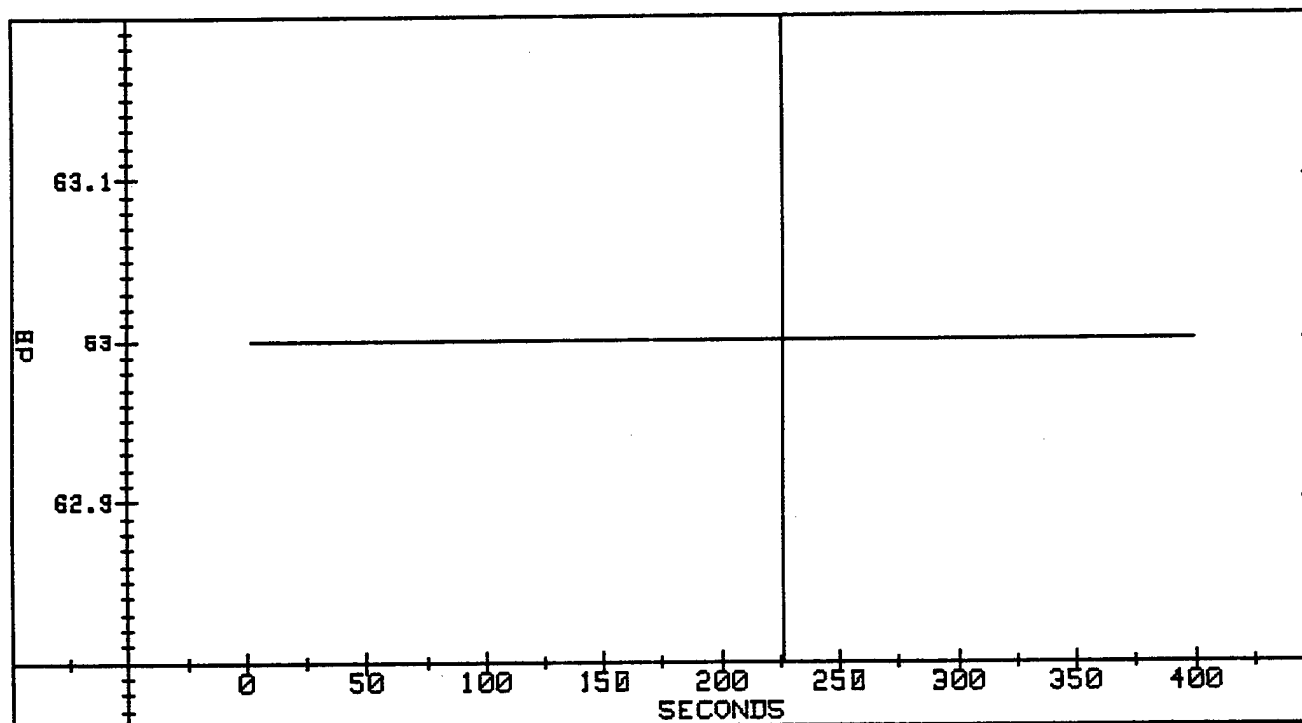
Ch3 RES Attenuation

DAY 170 TIME 0:57 PASS 10 m= 54, sd= 0



Ch4 RES Attenuation

DAY 178 TIME 0:57 PASS 18 m= 63, sd= 0

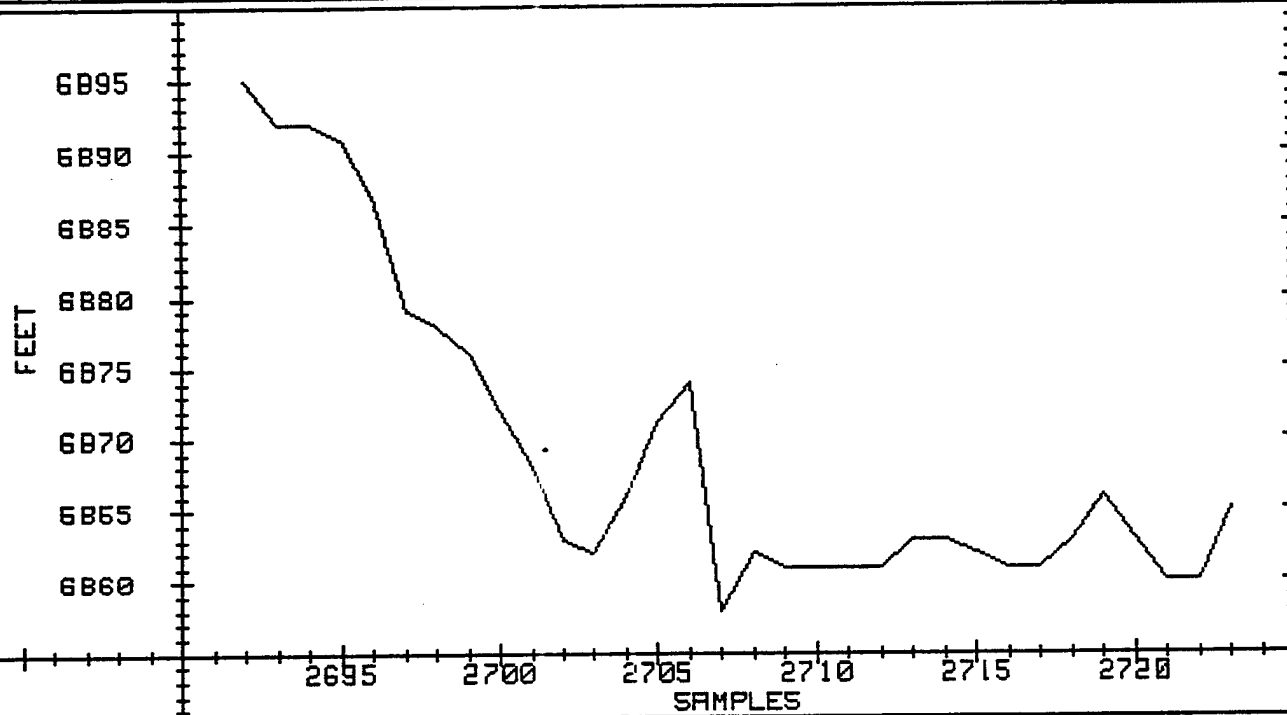


GPS ALTITUDE

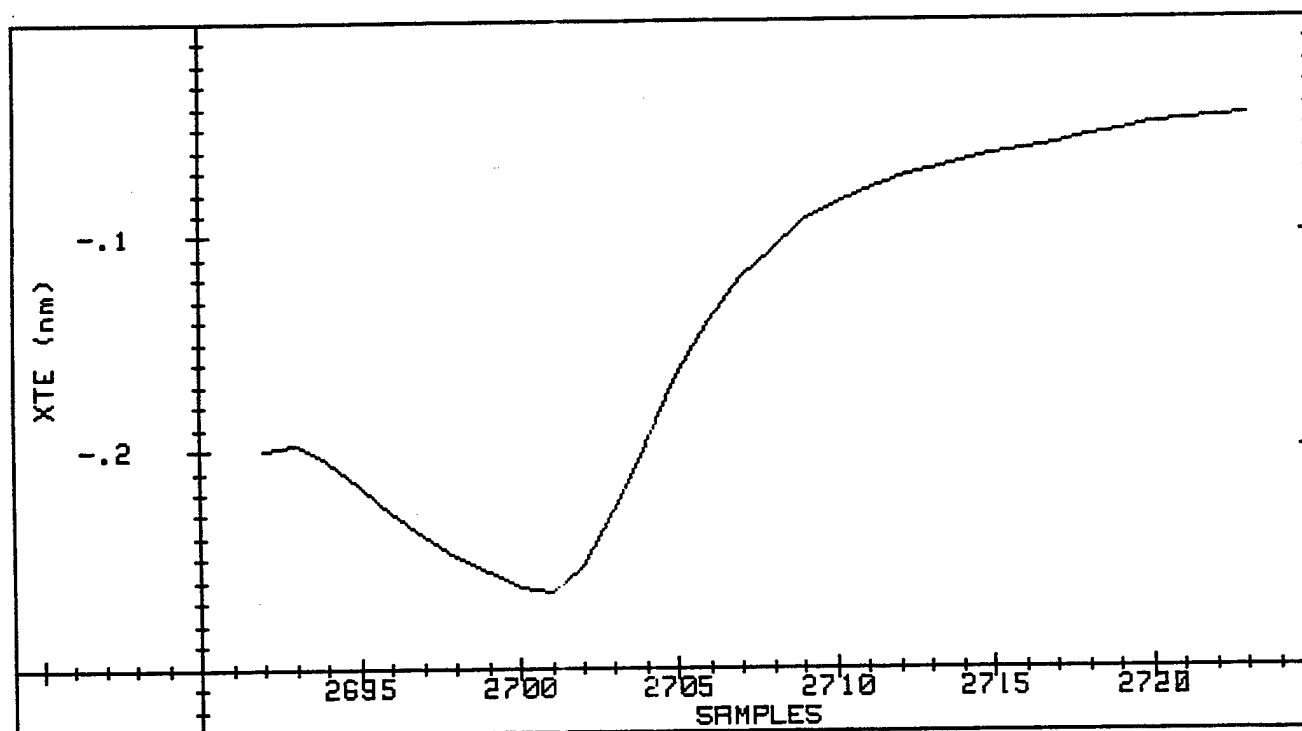
MEAN= 6869.28 STANDARD DEVIATION= 10.9494

DATE: June 26, 1995 PASS 18

OFF  
ON  
BAR

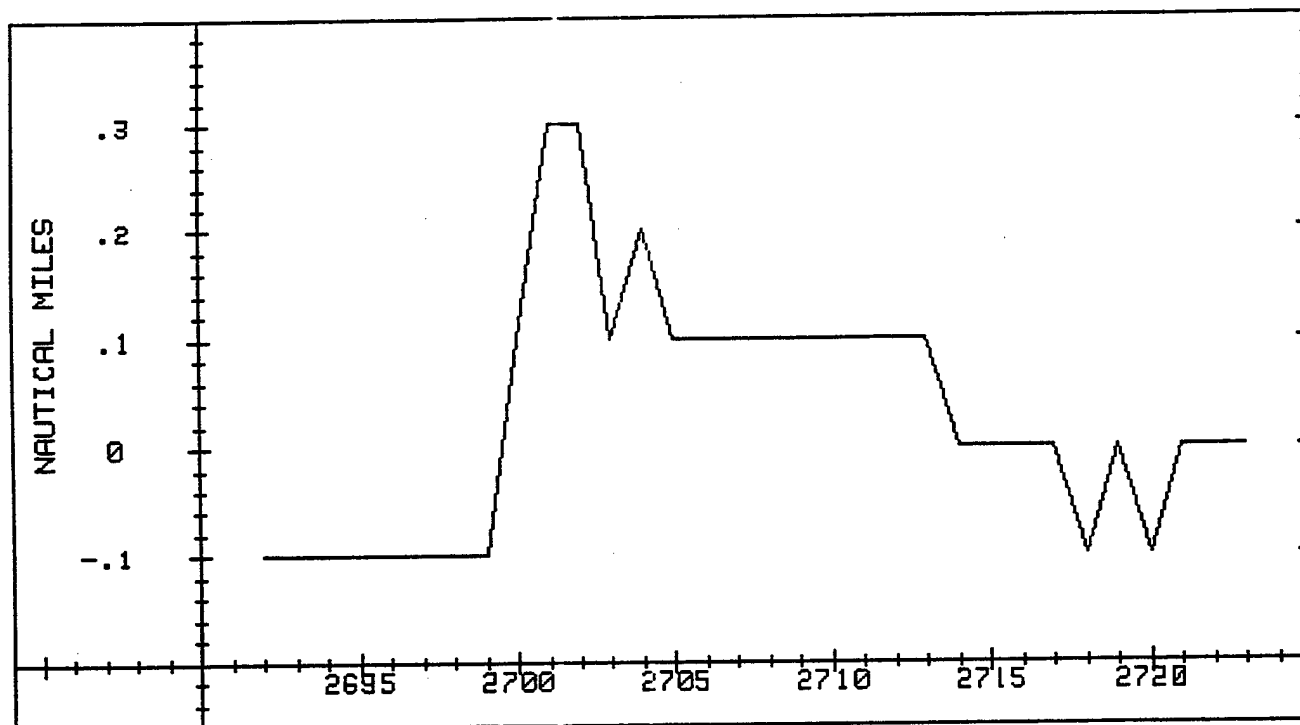


GPS Cross Track Error  
MEAN= -.13875      STANDARD DEVIATION= .0805977  
DATE: June 26, 1995      PASS 18

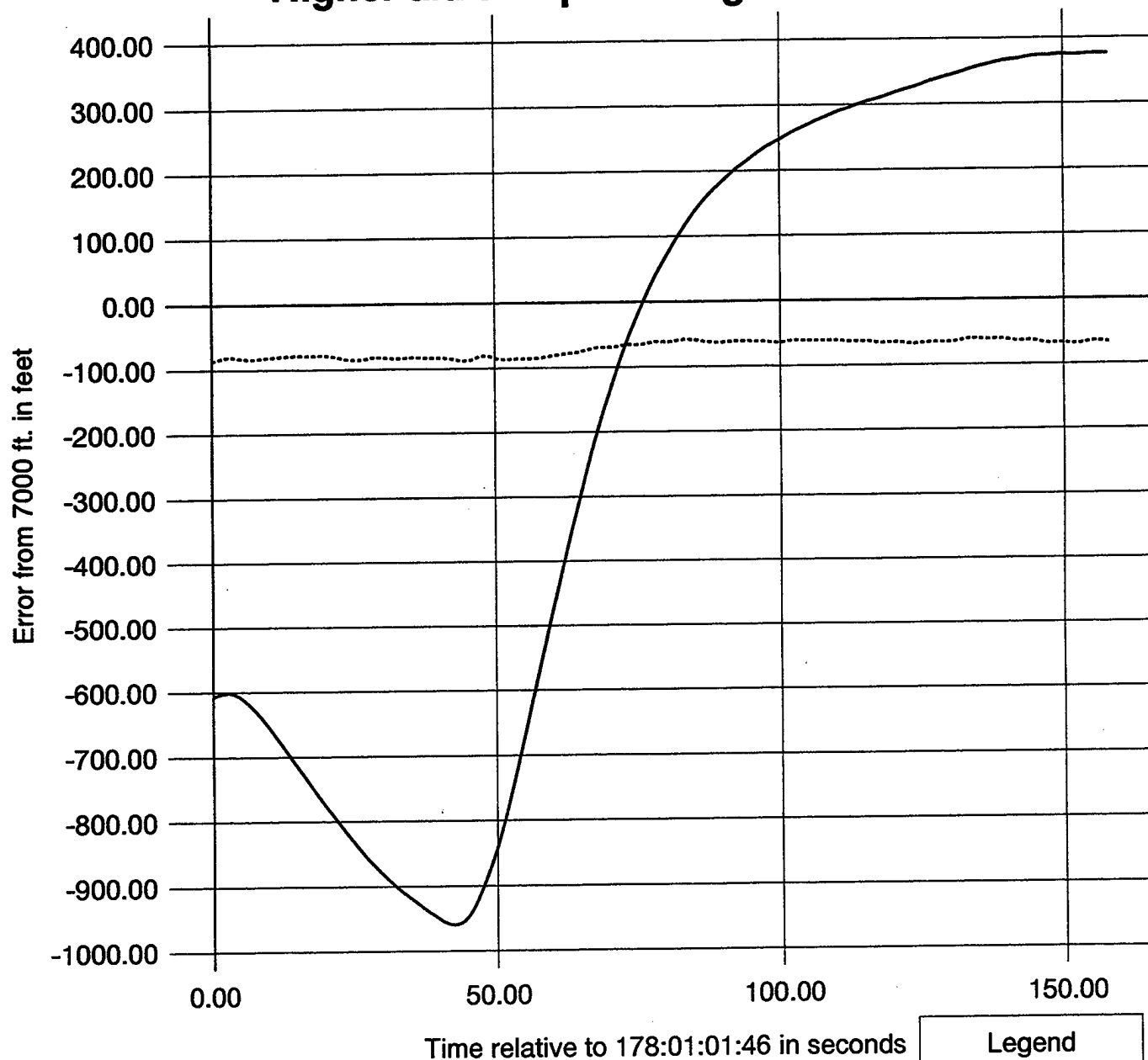


INS CROSS TRACK ERROR

MEAN= .028125      STANDARD DEVIATION= .112457  
DATE: June 26, 1995      PASS 18



**Portage, ME - June 26, 1995 - Pass 18 - Xtk. and Alt. Errors**  
**Higher alt. and port are greater than zero**



	Mean	St. Dev.
ALT.	-71.84	9.59
XTK.	-172.02	510.99



27 Jun 1995  
Tape: E1423

Post-line Data Sheet  
Line 35  
Mission: PORTAGE MAINE, DAY

Time: 178:01:13:38  
Pass 19  
Req.# 19

#### AIRCRAFT & CHANNEL DATA

Altitude		CH 1	CH 2	CH 3	CH 4
Desired:	6000 ft	p-VV	p-VH	p-HV	p-HH
Baro:	5845 ft s.d.=	2 Swath Ctr Ang:	15.0°	15.0°	15.0°
Slt. rng:	20632 ft	Tgt Dep Ang:	15.0°	15.0°	15.0°
Look:	Right	St rng (ft):	19097	19097	19097
Depr Ang:	25.0°	Near Rng Dep:	17.8°	17.8°	17.8°
Des. trk:	6.0°	Far Rng Dep:	9.6°	9.6°	9.6°
Start Sq:	90.0°	Atten (dB):	54.0	48.0	50.0
End Sq:	90.0°	RMS Video (%FS)	13.1	15.0	13.3
					63.0
					16.5

#### WAYPOINTS

	Latitude	Longitude
Line up:	N 46:28.17	W 68:37.88
Start:	N 46:40.10	W 68:36.07
End:	N 46:50.04	W 68:34.55
From:	N 30:07.84	W 70:34.28
To:	N 63:14.58	W 64:47.49

Main Target: GP  
Mocomp Point:  
Lat: N 46:44.73  
Long: W 68:30.56  
Tgt Trk: 0.0 Tgt Vel: 0.0  
Alt: 660.0 ft

#### RADAR PARAMETERS - for UWB

RTP Channel: 1  
Resolution: N/A  
Swath width: Single  
RMS Time Constant: 2^7  
Position Reference: ON  
Atten. Tracking: OFF  
Range Gate Delta: 0.0 ft  
Azimuth Presum Rate: Presum  
TX Chirp Filename: CTL1U2B

Filter damping is Hi -> 10 sec  
PRF Factor is FAST (262.5 kts)  
Ave Gndspd: Real -> 250.6 kts  
Mocomp Off for Chnl 1, 2, 3, 4  
GPS Vel/Pos Reference  
Adj Gnd Scene: 5000.0 ft  
Range Tracking is OFF  
Clutterlock Reference: OFF  
RX Chirp Filename: CRL1N0A

Ave Ref Vel -> -.1 fps (s.d.= .8)  
Ave Fil Vel -> -.6 fps (s.d.= .7)

NML XMIT PWR	ANT BIAS
X: -70.0	Elevation: 0.0°
L: -70.0	Azimuth: 0.0°
C: -70.0	Pitch: 0.0°
P: 46.2	

Tape Footage	Drive no.
Starting: 2694 ft	(1)
Ending: 3948 ft	(1)

Vel Bias	CAL Atten
X: 1035.0	X: 63.8 dB
Y: -433.0	L: 63.8 dB
Z: 6697.0	C: 63.8 dB

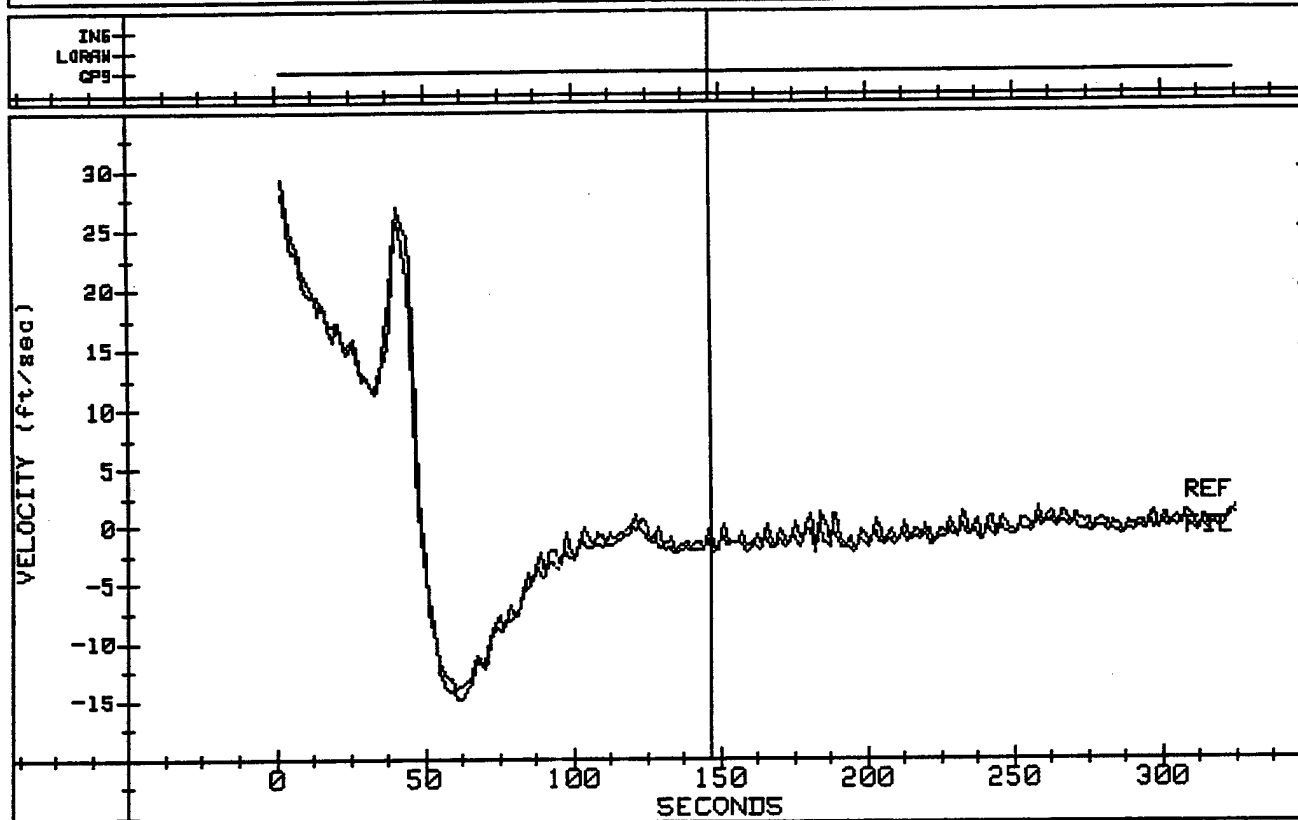
LINE Map Time (UCT)  
Start: 01:13:38  
End: 01:16:17

#### Mocomp Counters

Start: 1141976 00116CD8h  
End: 1168601 0011D4D9h

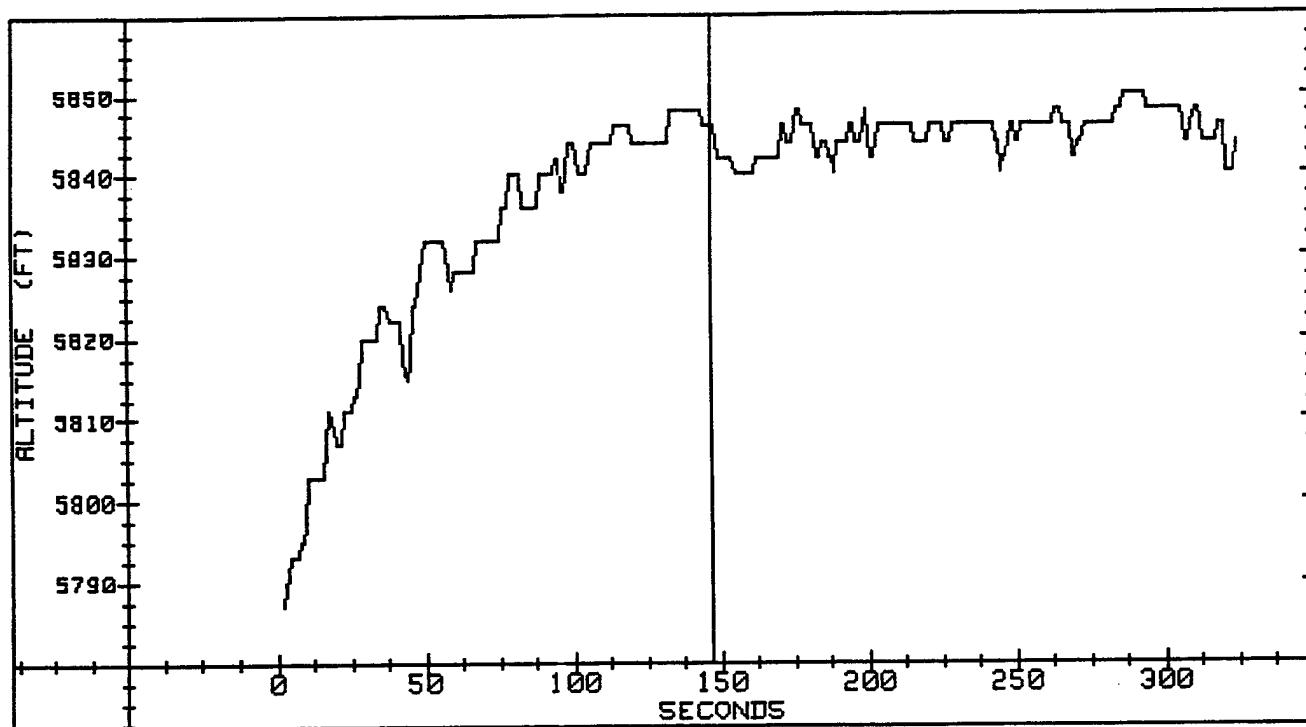
CPA (UCT): 00:00:00  
Alt: 0 ft (GPS)  
Lat: N 0:00: 0  
Lon: E 0:00: 0

FILTERED vs. REF. VELOCITY  
DAY 178 TIME 1:10 PASS 19



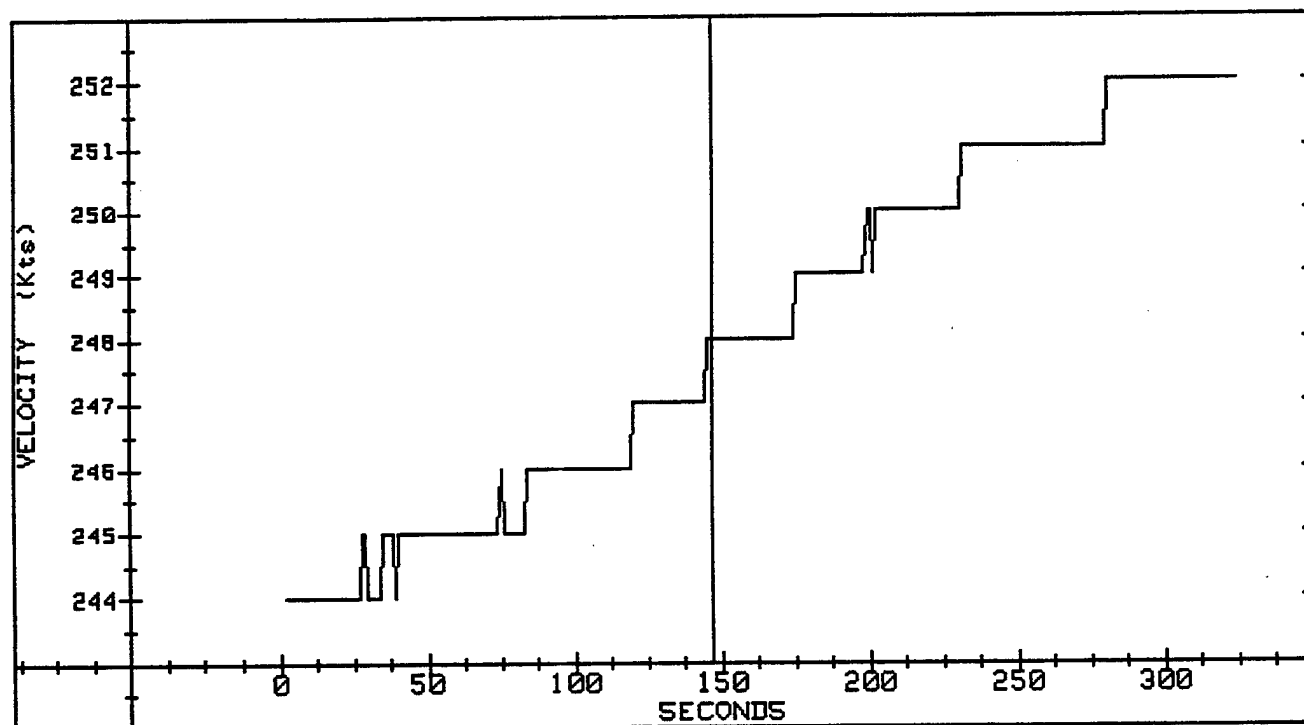
BARO ALTITUDE

DAY 170 TIME 1:10 PASS 19 m= 5845, sd= 2.1588



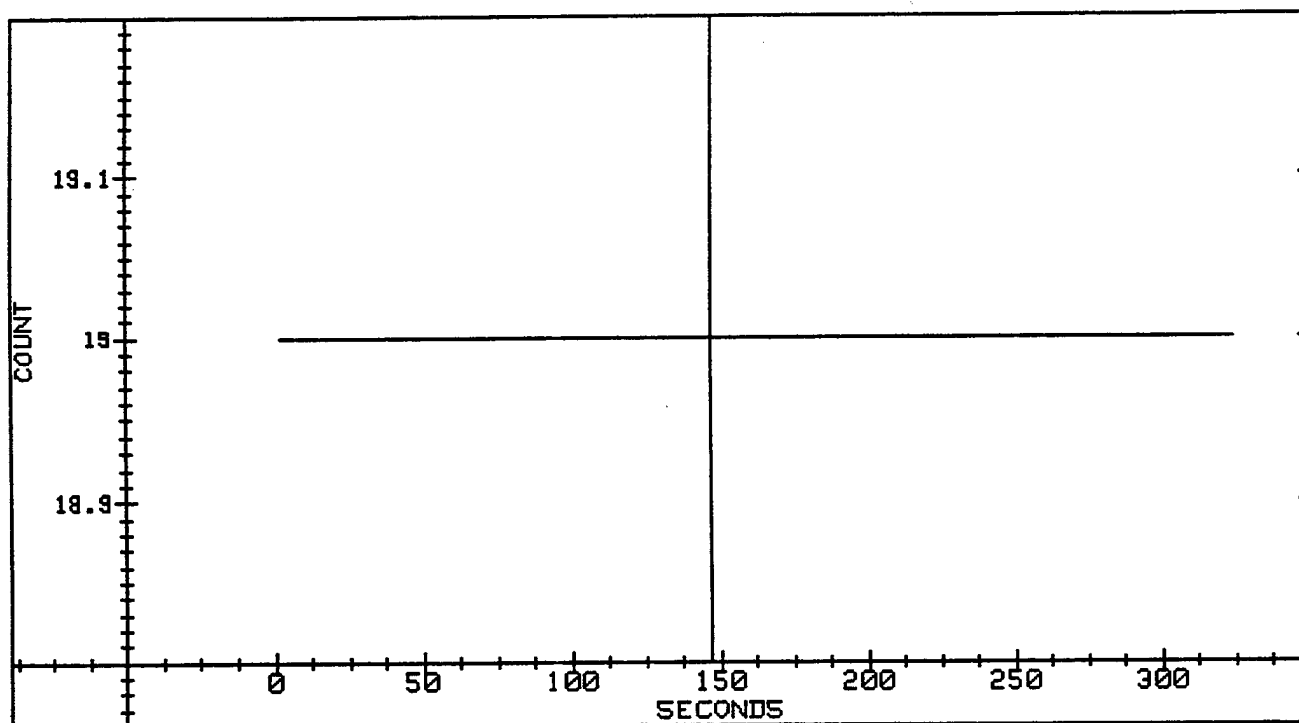
## INS GROUND SPEED

DRY 178 TIME 1:10 PASS 19 m= 250.6, sd= 1.22162



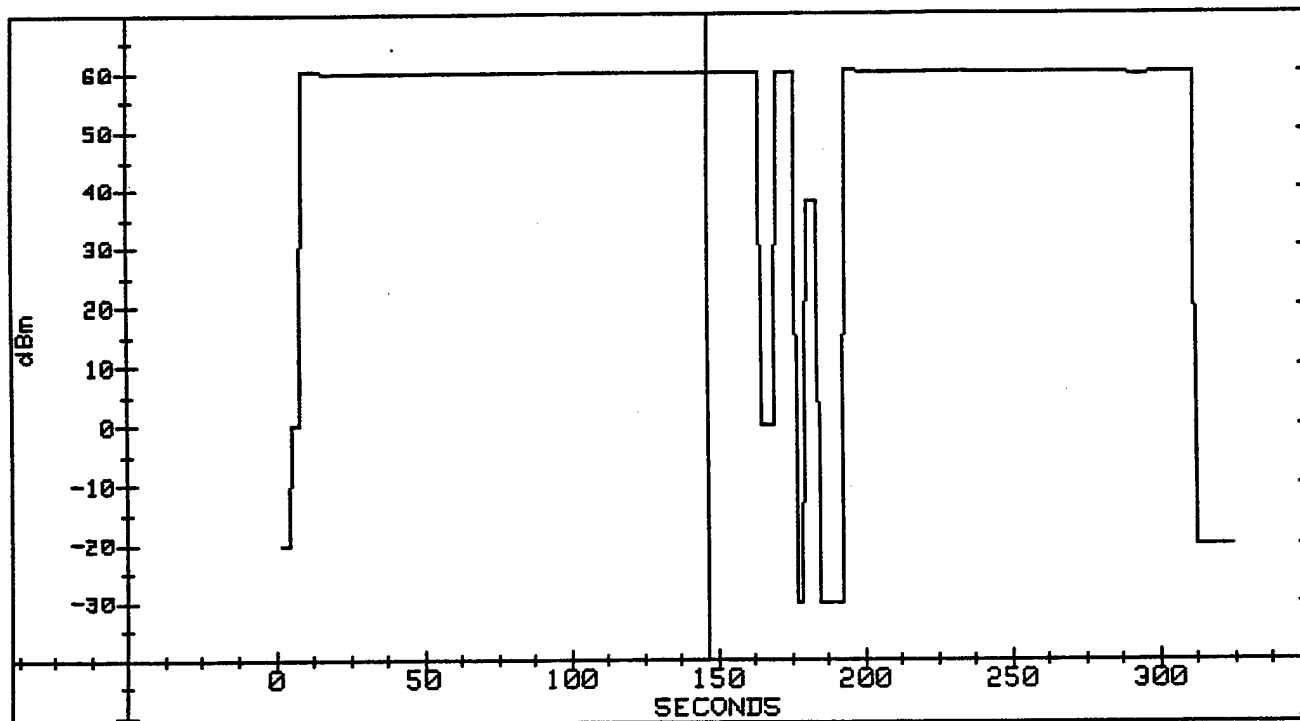
# PASS NUMBER

DAY 170 TIME 1:10 PASS 19 m= 19, sd= 0



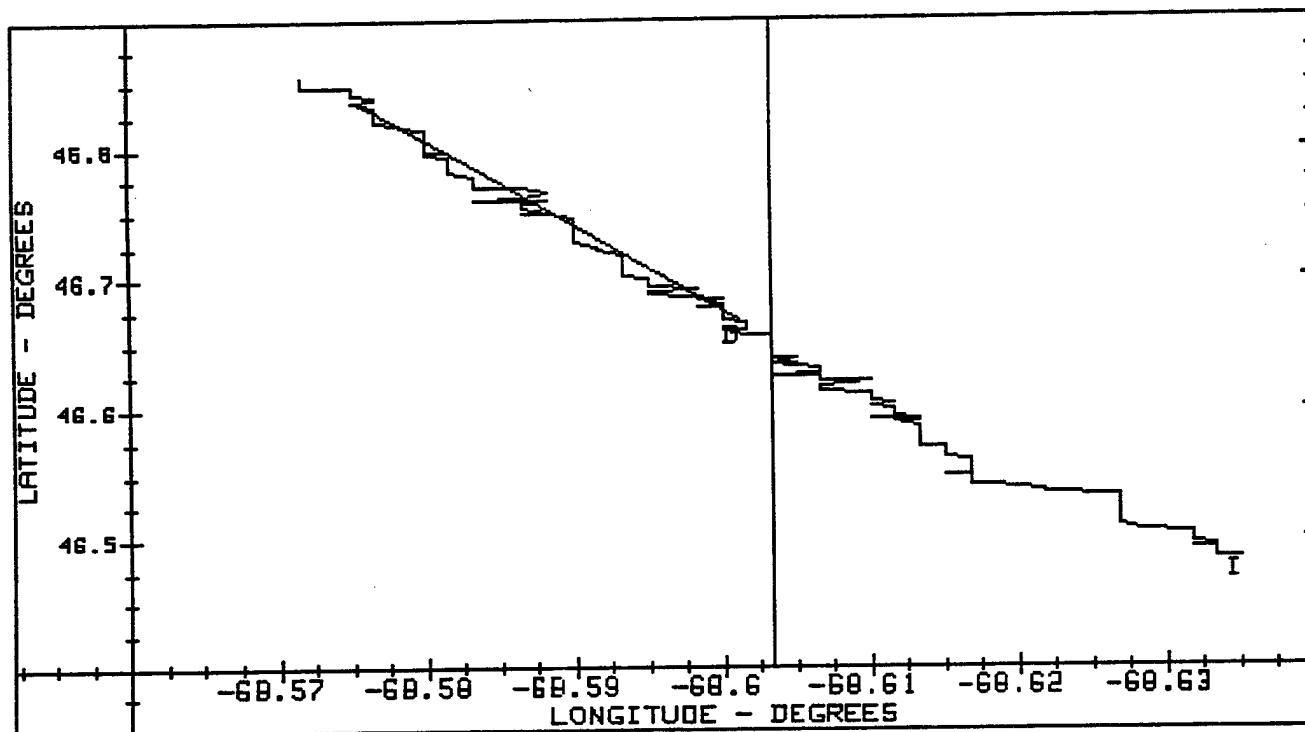
P Band Power

DRY 178 TIME 1:10 PASS 19 m= 44.61, sd= 31.1090



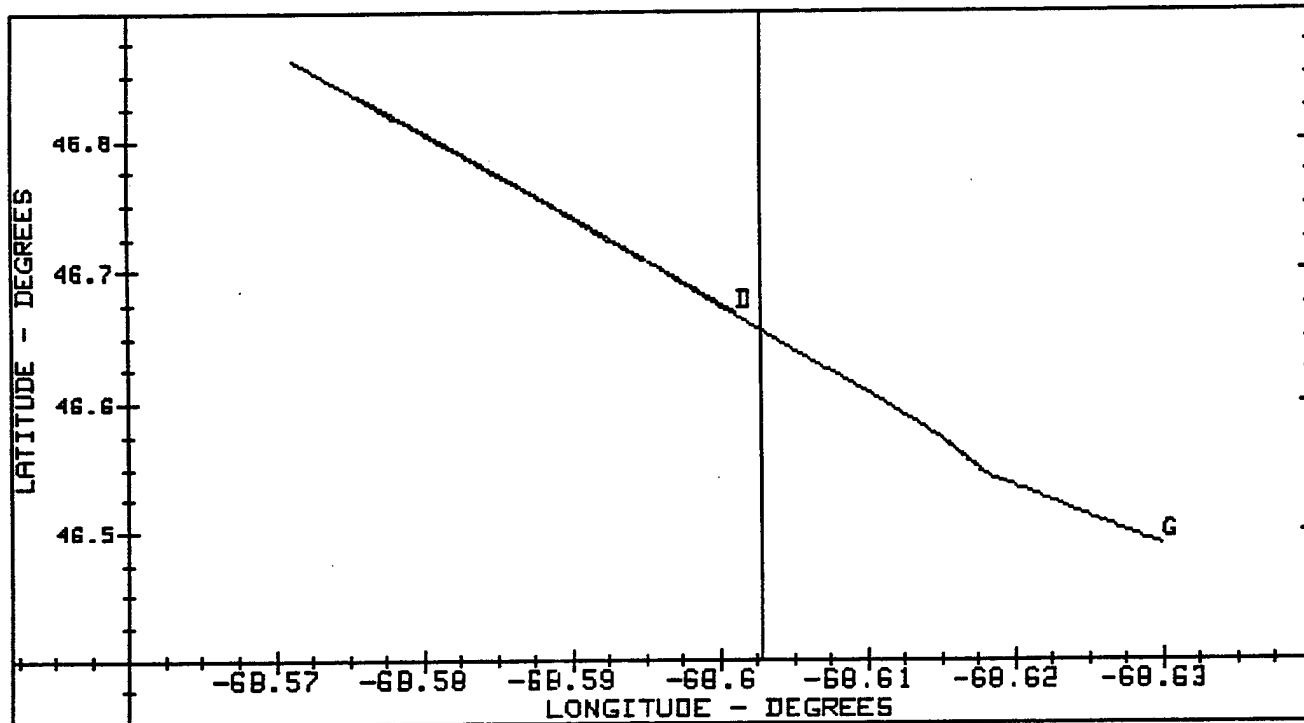
INS AIRCRAFT POSITION

DAY 178 TIME 1:10 PASS 19



GPS AIRCRAFT POSITION

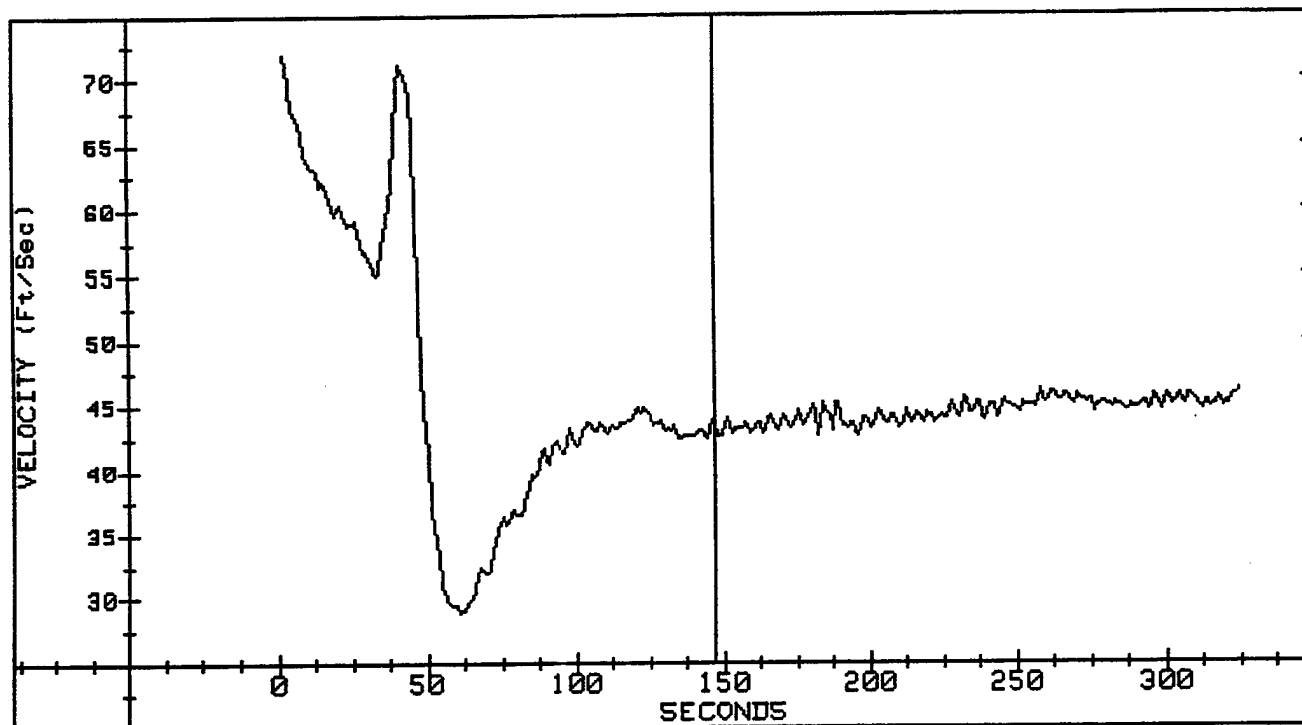
DAY 170 TIME 1:10 PASS 19





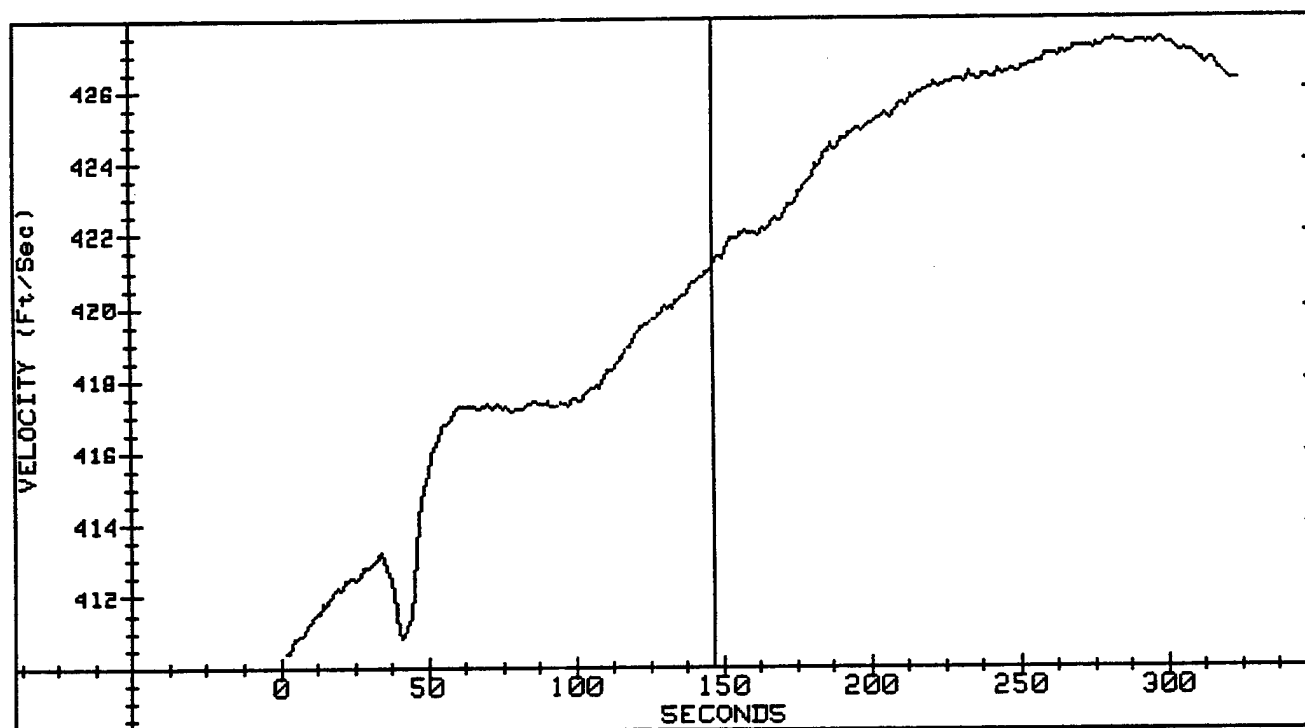
GPS V<sub>e</sub>

DRY 178 TIME 1:10 PASS 19 m= 44.67, sd= .779652



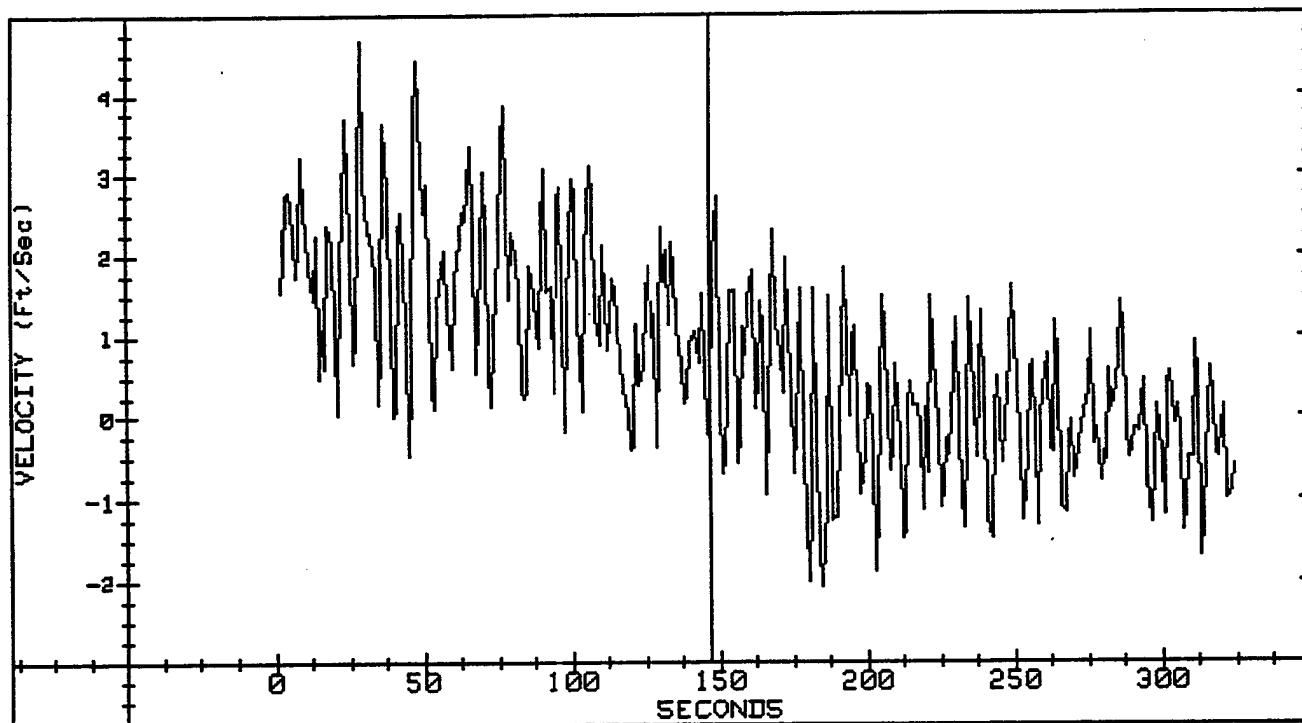
GPS Vn

DAY 17B TIME 1:10 PASS 19 m= 426, sd= 1.40154



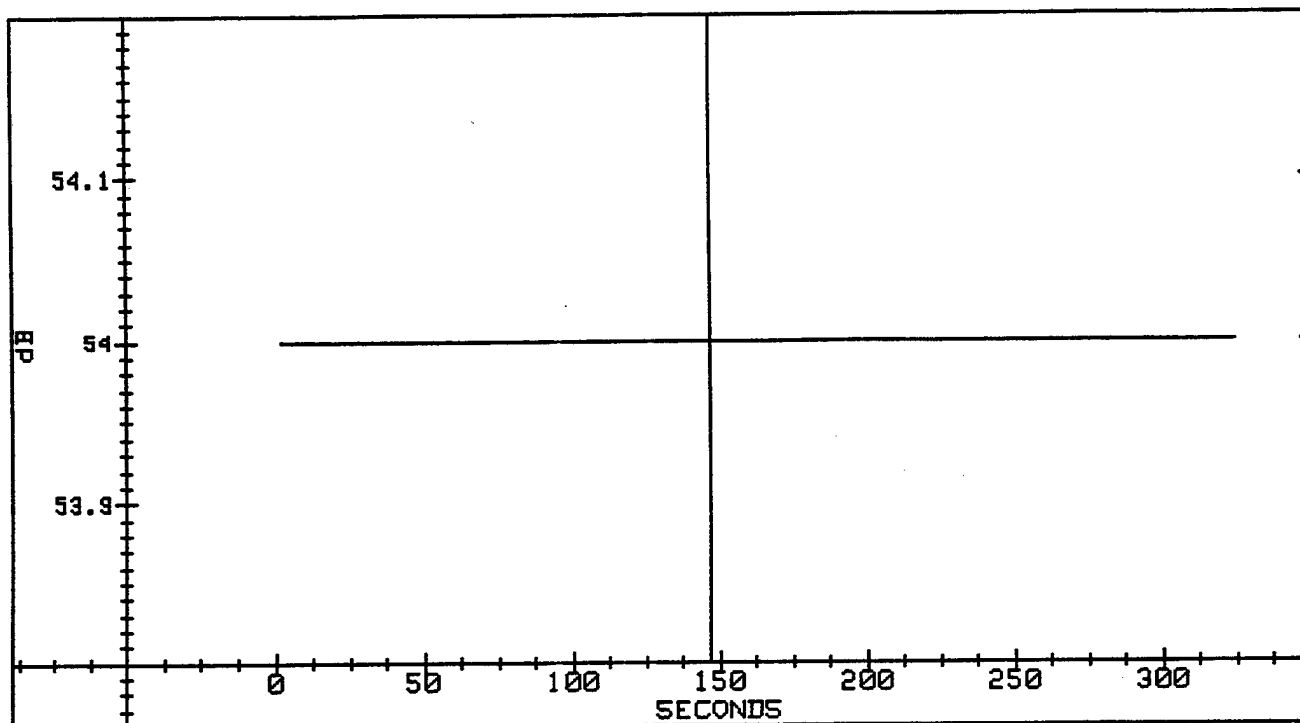
GPS Vv

DAY 178 TIME 1:10 PASS 19 m= -.07949, sd= .071441



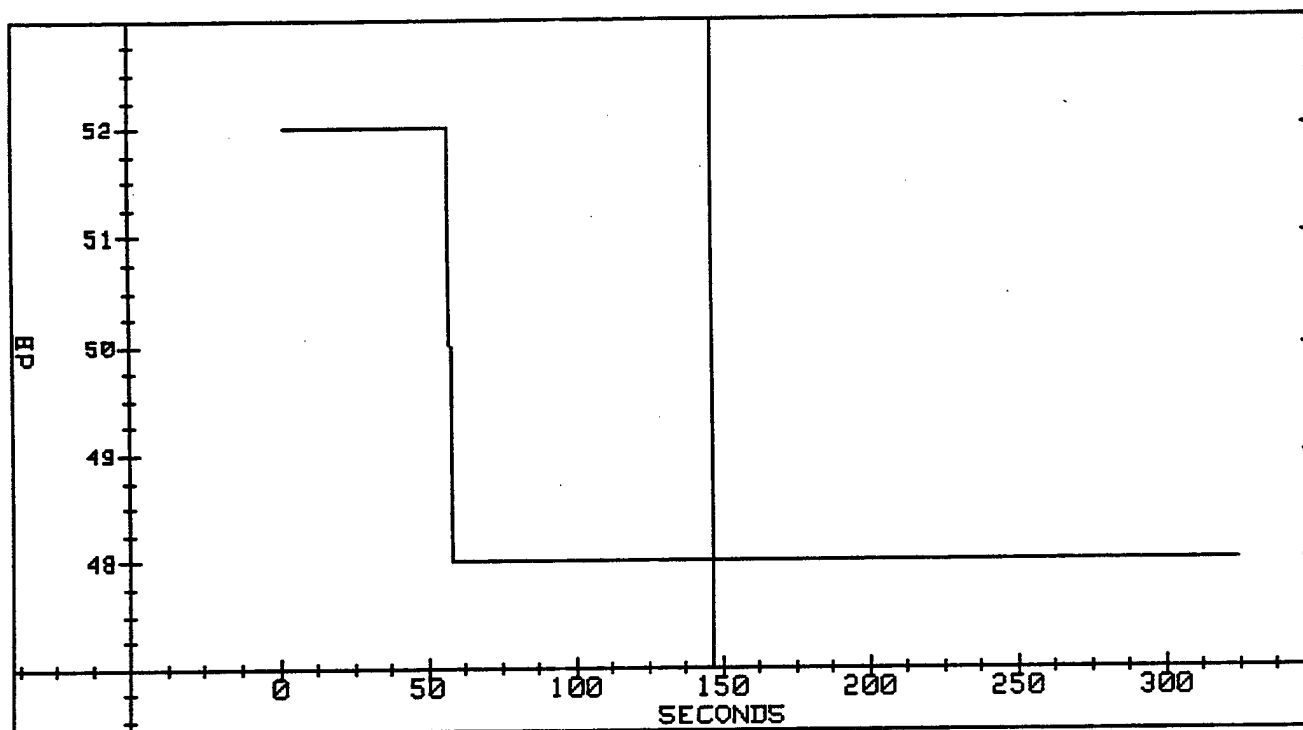
Ch1 RES Attenuation

DAY 178 TIME 1:10 PASS 19 m= 54. sd= 0



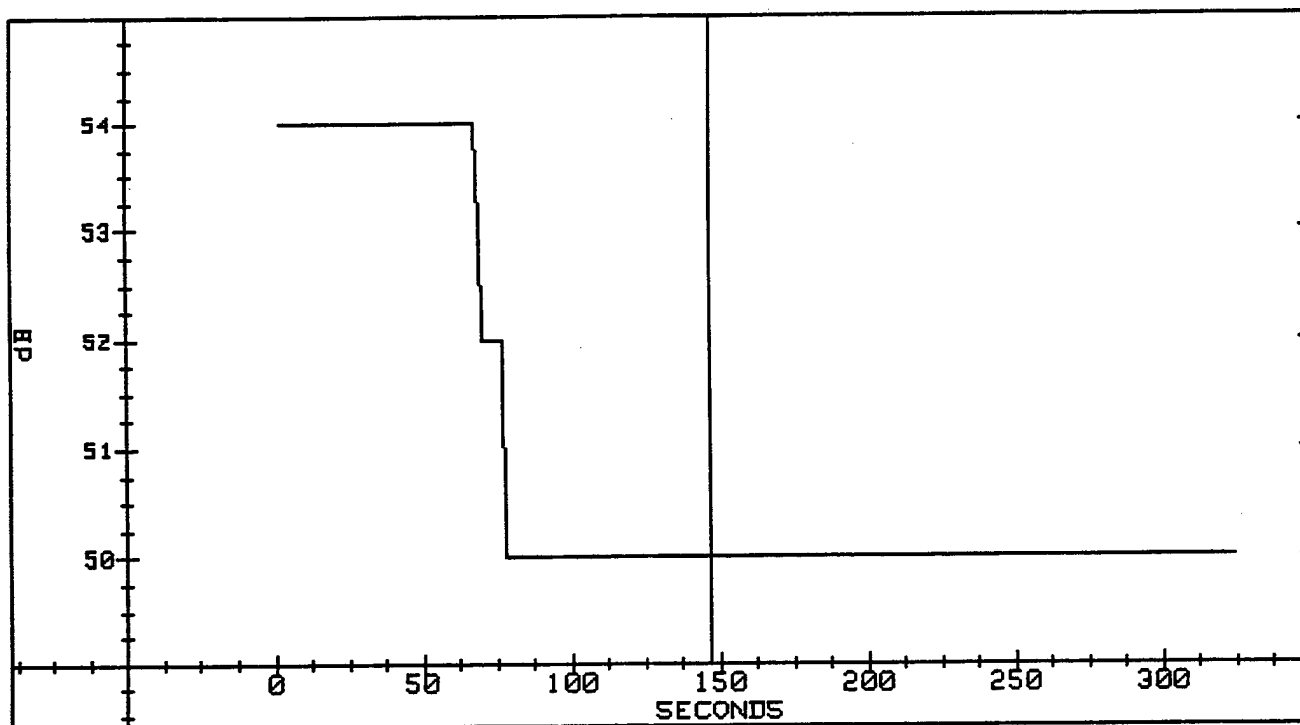
Ch2 RES Attenuation

DAY 178 TIME 1:10 PASS 19 m= 48, sd= 0



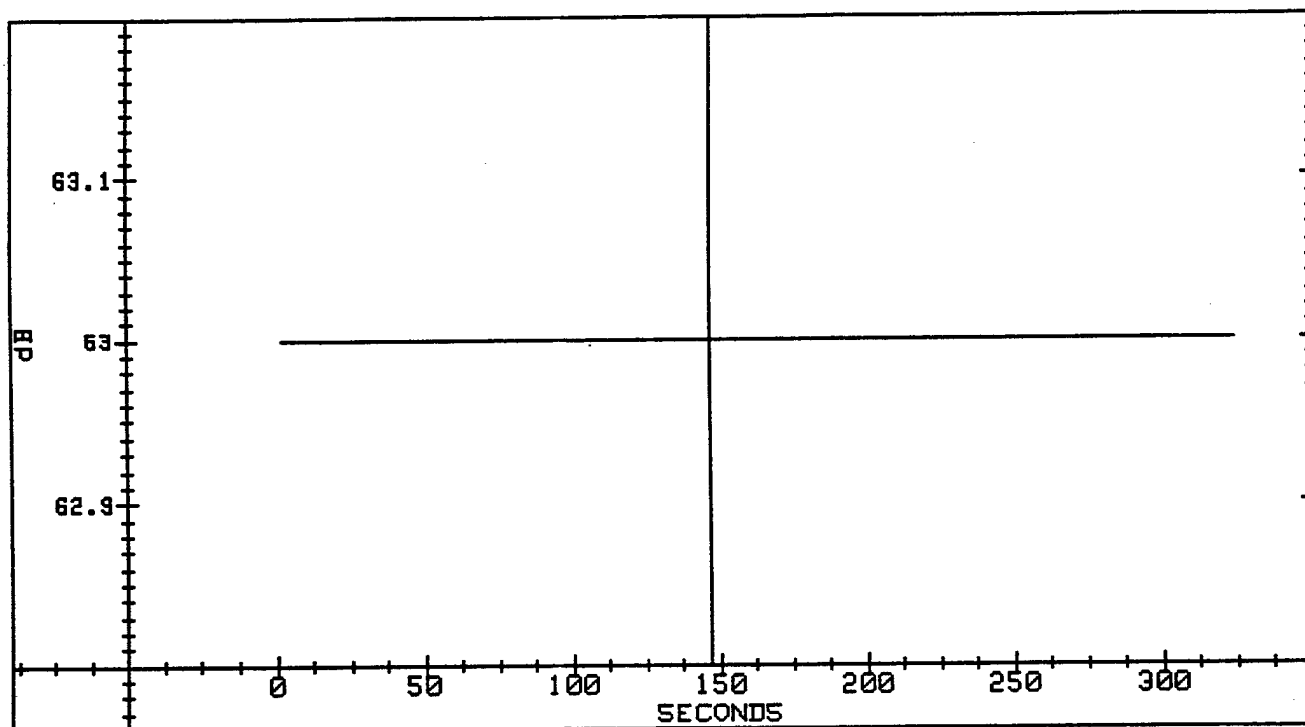
Ch3 RES Attenuation

DAY 170 TIME 1:10 PASS 19 m= 50, sd= 0



Ch4 RES Attenuation

DAY 178 TIME 1:10 PASS 19 m= 63, sd= 0

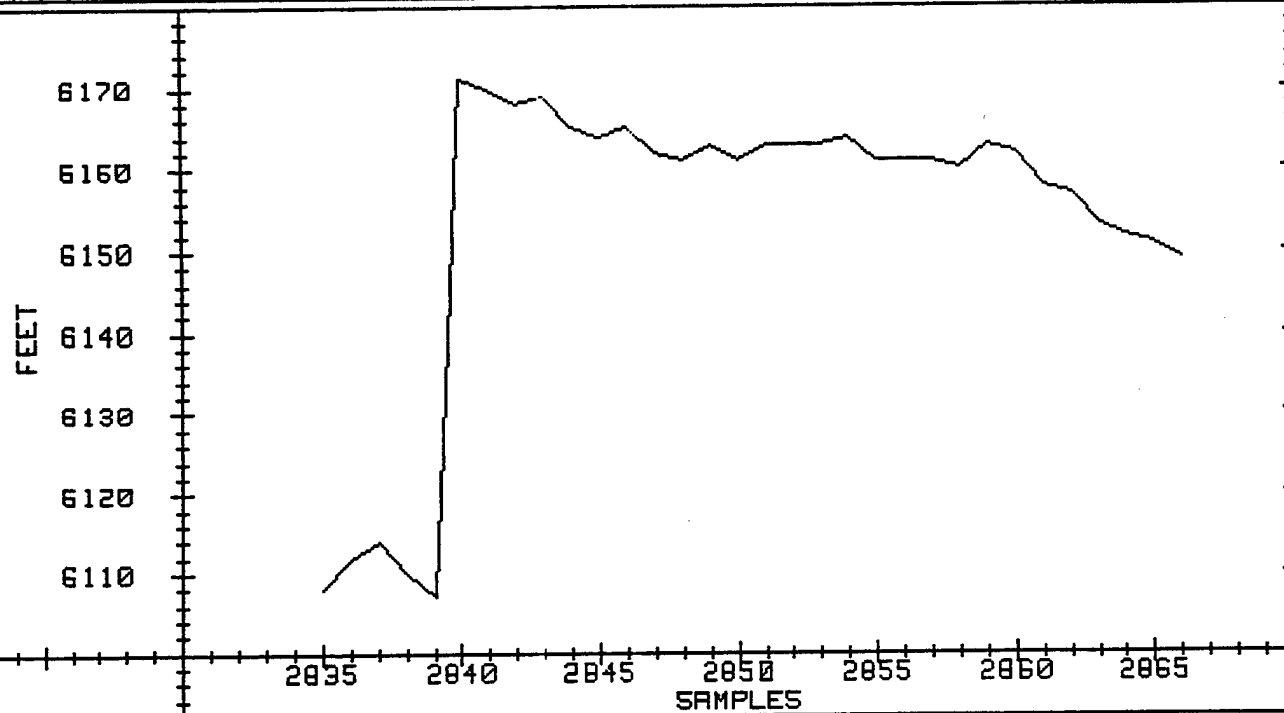


GPS ALTITUDE

MEAN= 6153.47      STANDARD DEVIATION= 19.2857

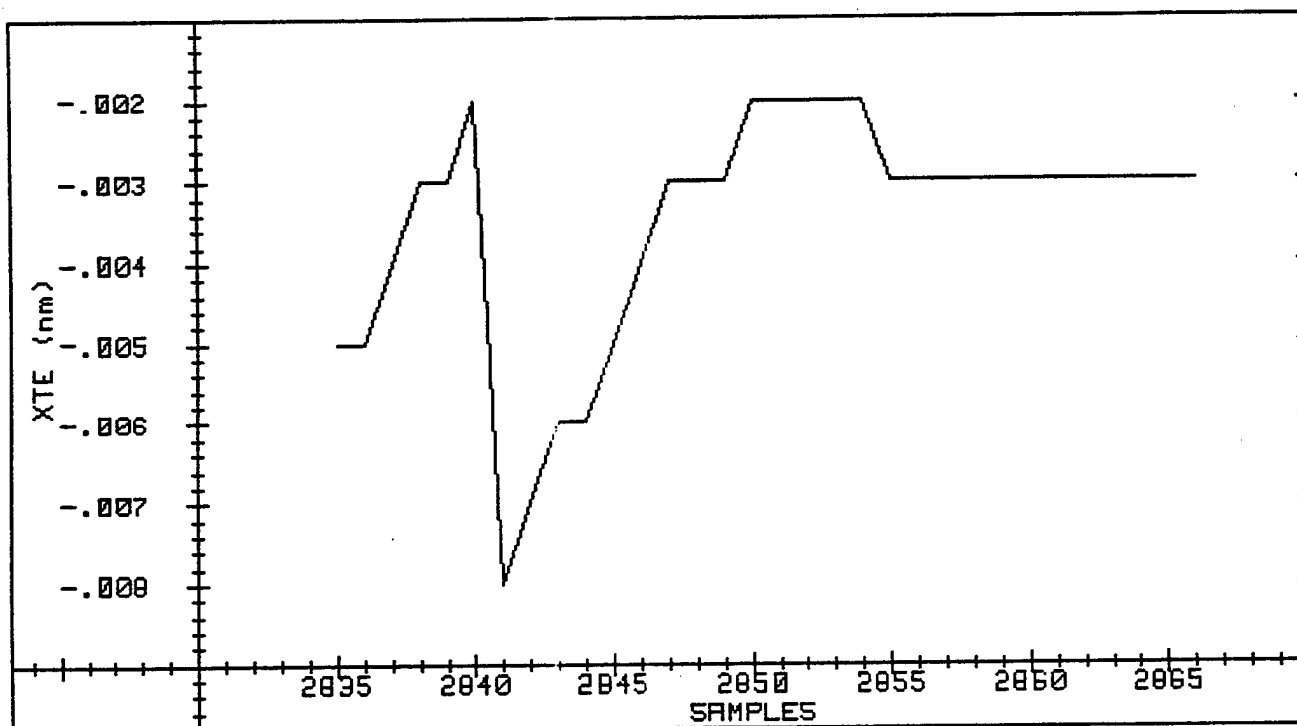
DATE: June 26, 1995      PASS 19

OFF  
ON  
BAR





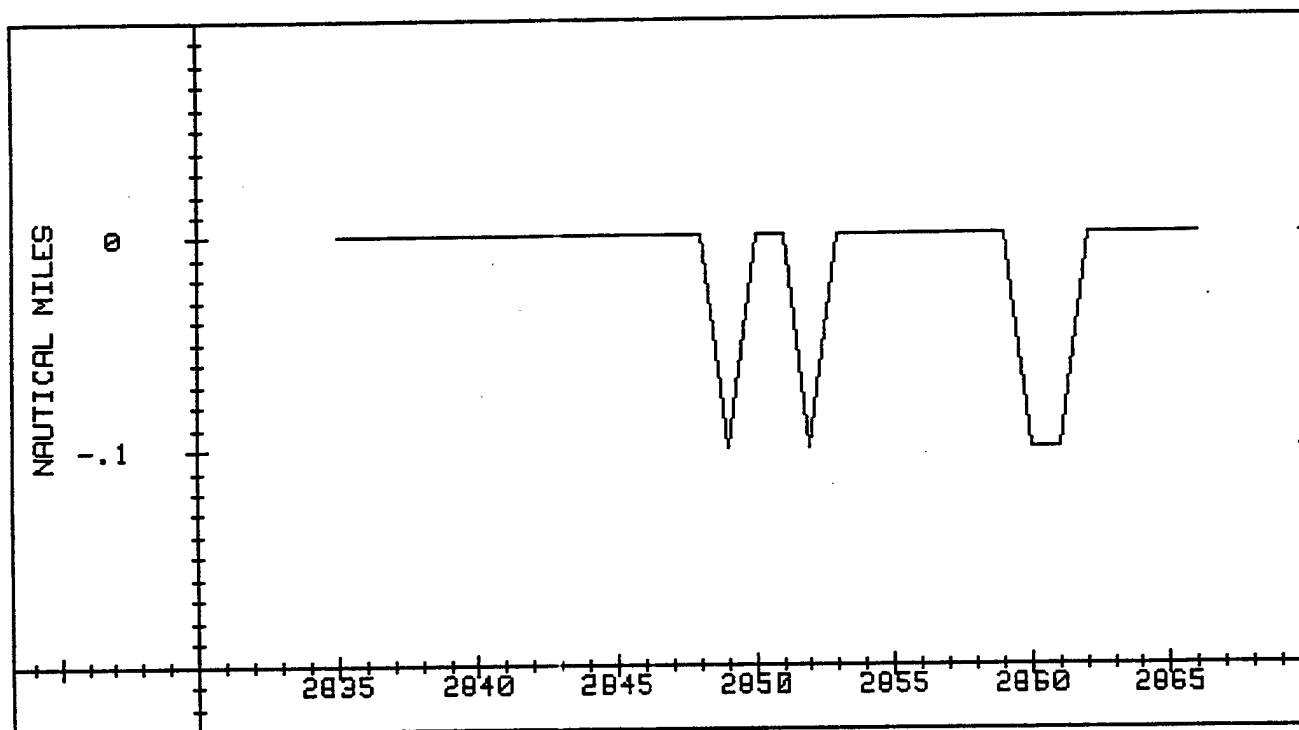
GPS Cross Track Error  
MEAN= -.00353125      STANDARD DEVIATION= .00147869  
DATE: June 26, 1995      PASS 19



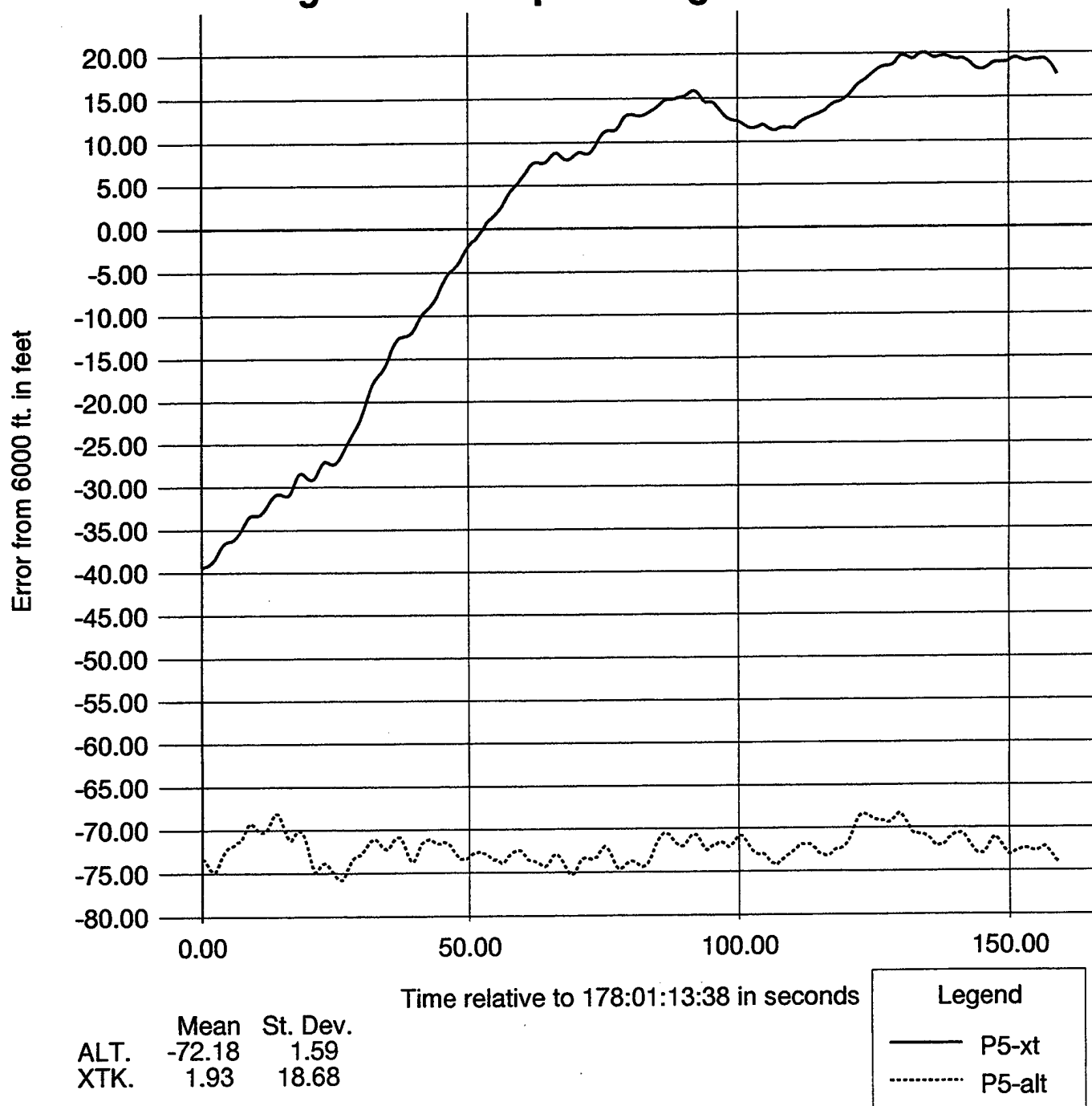
INS CROSS TRACK ERROR

MEAN- -.0125      STANDARD DEVIATION- .0330719

DATE: June 26, 1995      PASS 19



# **Portage, ME - June 26, 1995 - Pass 19 - Xtk. and Alt. Errors** **Higher alt. and port are greater than zero**



27 Jun 1995  
Tape: E1423

Post-line Data Sheet  
Line 37  
Mission: PORTAGE MAINE, DAY

Time: 178:01:24:19  
Pass 20  
Req.# 20

# AIRCRAFT & CHANNEL DATA

Altitude			CH 1	CH 2	CH 3	CH 4
Desired:	6000 ft	Wave/Pol.:	p-VV	p-VH	p-HV	p-HH
Baro:	5833 ft s.d.=	1 Swath Ctr Ang:	15.0°	15.0°	15.0°	15.0°
Slt. rng:	20632 ft	Tgt Dep Ang:	15.0°	15.0°	15.0°	15.0°
Look:	Right	St rng (ft):	19097	19097	19097	19097
Depr Ang:	25.0°	Near Rng Dep:	17.8°	17.8°	17.8°	17.8°
Des. trk:	186.0°	Far Rng Dep:	9.5°	9.5°	9.5°	9.5°
Start Sq:	90.0°	Atten (dB):	51.0	48.0	50.0	63.0
End Sq:	90.0°	RMS Video (%FS)	18.7	24.1	15.4	9.5

# WAYPOINTS

	Latitude	Longitude
Line up:	N 47:01.28	W 68:23.22
Start:	N 46:49.35	W 68:25.06
End:	N 46:39.41	W 68:26.58
From:	N 63:13.90	W 64:38.04
To:	N 30:07.15	W 70:24.80

Main Target: GP  
Mocomp Point:  
Lat: N 46:44.73  
Long: W 68:30.56  
Tgt Trk: 0.0 Tgt Vel: 0.0  
Alt: 660.0 ft

# RADAR PARAMETERS - for UWB

RTP Channel: 1  
Resolution: N/A  
Swath width: Single  
RMS Time Constant: 2^7  
Position Reference: ON  
Atten. Tracking: OFF  
Range Gate Delta: 0.0 ft  
Azimuth Presum Rate: Presum6  
TX Chirp Filename: CTL1U2B

Filter damping is Hi -> 10 sec  
PRF Factor is FAST (262.5 kts)  
Ave Gndspd: Real -> 247.0 kts  
Mocomp Off for Chnl 1, 2, 3, 4  
GPS Vel/Pos Reference  
Adj Gnd Scene: 5000.0 ft  
Range Tracking is OFF  
Clutterlock Reference: OFF  
RX Chirp Filename: CRL1N0A

Ave Ref Vel -> -1.3 fps (s.d.= .4)  
Ave Fil Vel -> -.8 fps (s.d.= .2)

NML XMIT PWR	ANT BIAS
X: -70.0	Elevation: 0.0°
L: -70.0	Azimuth: 0.0°
C: -70.0	Pitch: 0.0°
P: 46.9	

Tape Footage	Drive no.
Starting: 3962 ft	(1)
Ending: 5206 ft	(1)

Vel Bias	CAL Atten
X: 1035.0	X: 63.8 dB
Y: -433.0	L: 63.8 dB
Z: 6697.0	C: 63.8 dB

LINE Map Time (UCT)  
Start: 01:24:19  
End: 01:27:01

# Mocomp Counters

Start: 1198955 00124B6Bh  
End: 1200623 001251EFh

CPA (UCT): 00:00:00  
Alt: 0 ft (GPS)  
Lat: N 0:00: 0  
Lon: E 0:00: 0

27 Jun 1995  
Tape: E1423

Post-line Data Sheet  
Line 37  
Mission: PORTAGE MAINE, DAY

Time: 178:01:24:28  
Pass 21  
Req.# 20

#### AIRCRAFT & CHANNEL DATA

Altitude			CH 1	CH 2	CH 3	CH 4
Desired:	6000 ft	Wave/Pol.:	p-VV	p-VH	p-HV	p-HH
Baro:	5828 ft s.d.=	4 Swath Ctr Ang:	15.0°	15.0°	15.0°	15.0°
Slt. rng:	20632 ft	Tgt Dep Ang:	15.0°	15.0°	15.0°	15.0°
Look:	Right	St rng (ft):	19097	19097	19097	19097
Depr Ang:	25.0°	Near Rng Dep:	17.8°	17.8°	17.8°	17.8°
Des. trk:	186.0°	Far Rng Dep:	9.5°	9.5°	9.5°	9.5°
Start Sq:	90.0°	Atten (dB):	51.0	48.0	50.0	61.0
End Sq:	90.0°	RMS Video (%FS)	18.4	22.1	15.7	9.3

#### WAYPOINTS

	Latitude	Longitude
Line up:	N 47:01.28	W 68:23.22
Start:	N 46:49.35	W 68:25.06
End:	N 46:39.41	W 68:26.58
From:	N 63:13.90	W 64:38.04
To:	N 30:07.15	W 70:24.80

Main Target: GP  
Mocomp Point:  
Lat: N 46:44.73  
Long: W 68:30.56  
Tgt Trk: 0.0 Tgt Vel: 0.0  
Alt: 660.0 ft

#### RADAR PARAMETERS - for UWB

RTP Channel: 1  
Resolution: N/A  
Swath width: Single  
RMS Time Constant: 2^7  
Position Reference: ON  
Atten. Tracking: OFF  
Range Gate Delta: 0.0 ft  
Azimuth Presum Rate: Presum6  
TX Chirp Filename: CTL1U2B

Filter damping is Hi -> 10 sec  
PRF Factor is FAST (262.5 kts) -  
Ave Gndspd: Real -> 243.7 kts  
Mocomp Off for Chnl 1, 2, 3, 4  
GPS Vel/Pos Reference  
Adj Gnd Scene: 5000.0 ft  
Range Tracking is OFF  
Clutterlock Reference: OFF  
RX Chirp Filename: CRL1N0A

Ave Ref Vel -> -1.8 fps (s.d.= .7)  
Ave Fil Vel -> -1.4 fps (s.d.= .5)

NML XMIT PWR	ANT BIAS
X: -70.0	Elevation: 0.0°
L: -70.0	Azimuth: 0.0°
C: -70.0	Pitch: 0.0°
P: 46.8	

Tape Footage	Drive no.
Starting: 3962 ft	(1)
Ending: 5206 ft	(1)

Vel Bias	CAL Atten
X: 1035.0	X: 63.8 dB
Y: -433.0	L: 63.8 dB
Z: 6697.0	C: 63.8 dB

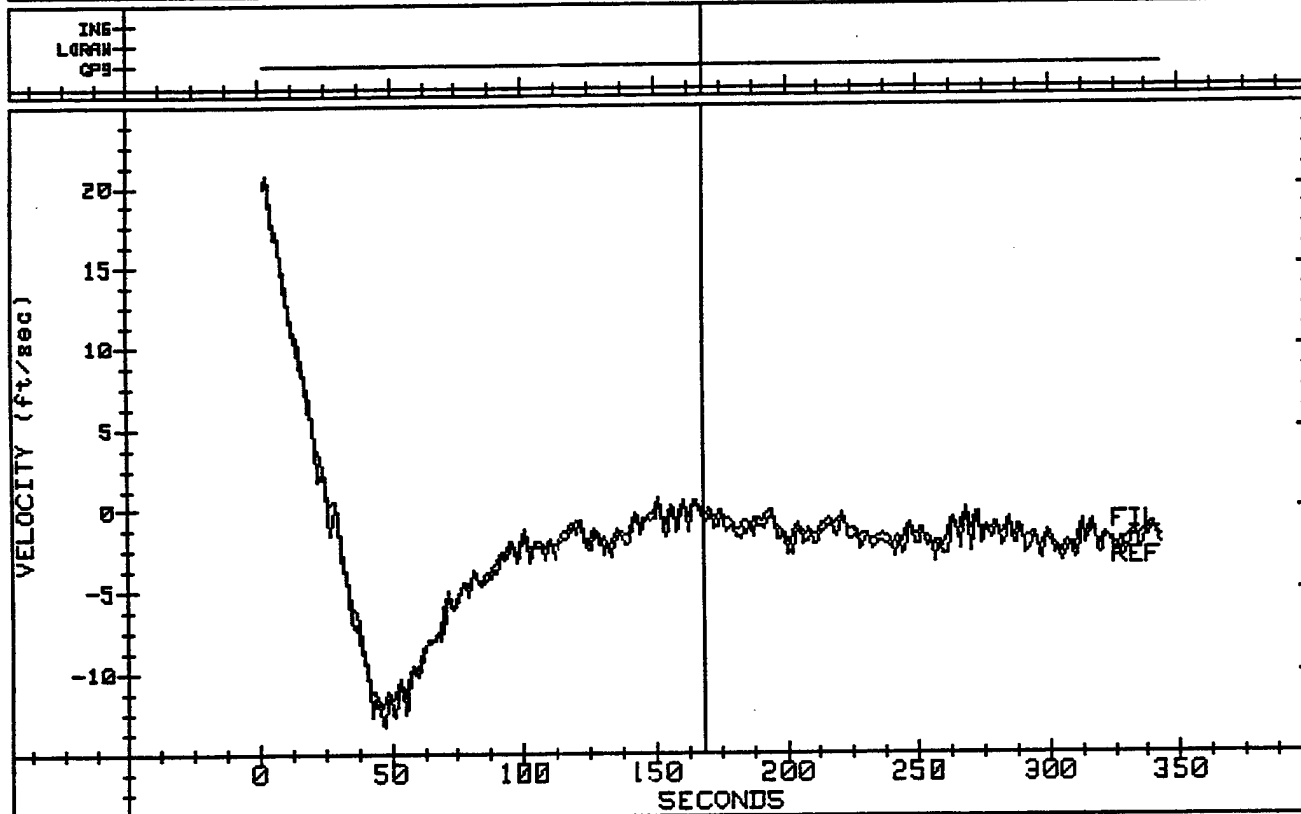
LINE Map Time (UCT)  
Start: 01:24:28  
End: 01:27:01

#### Mocomp Counters

Start: 1200623 001251EFh  
End: 1226131 0012B593h

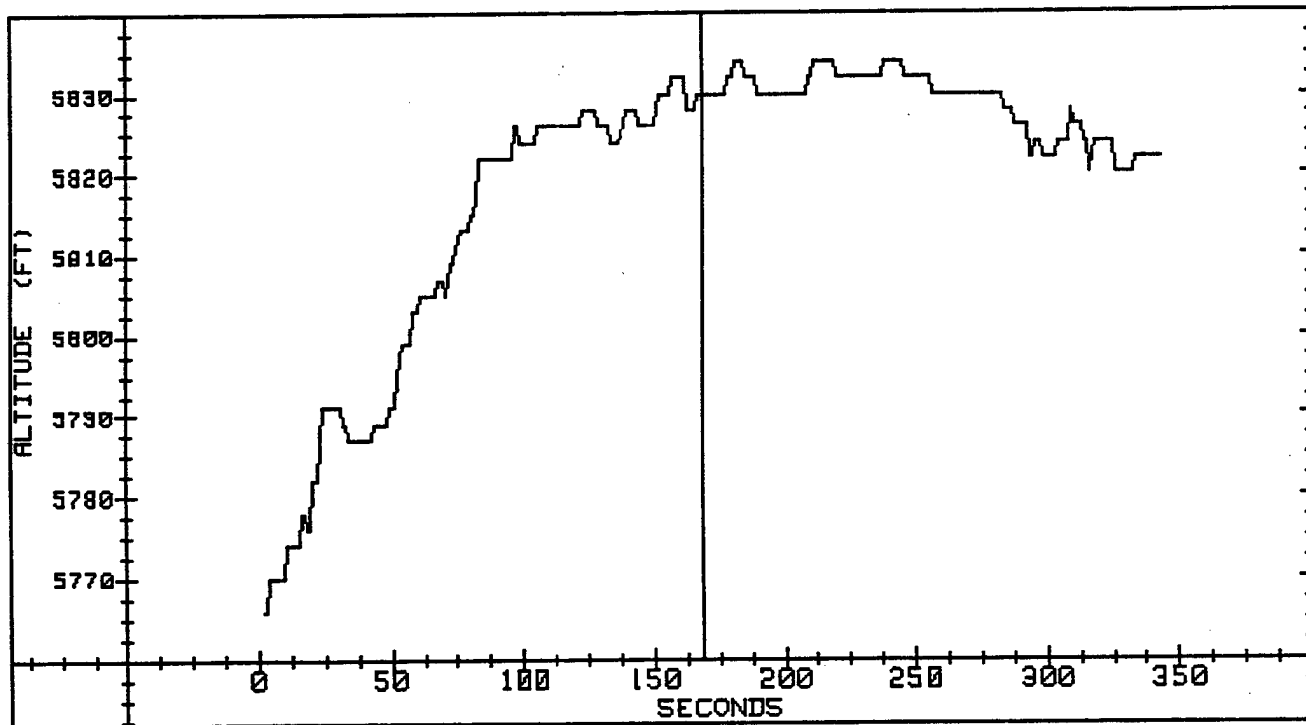
CPA (UCT): 00:00:00  
Alt: 0 ft (GPS)  
Lat: N 0:00: 0  
Lon: E 0:00: 0

FILTERED vs. REF. VELOCITY  
DAY 178 TIME 1:21 PASS 20



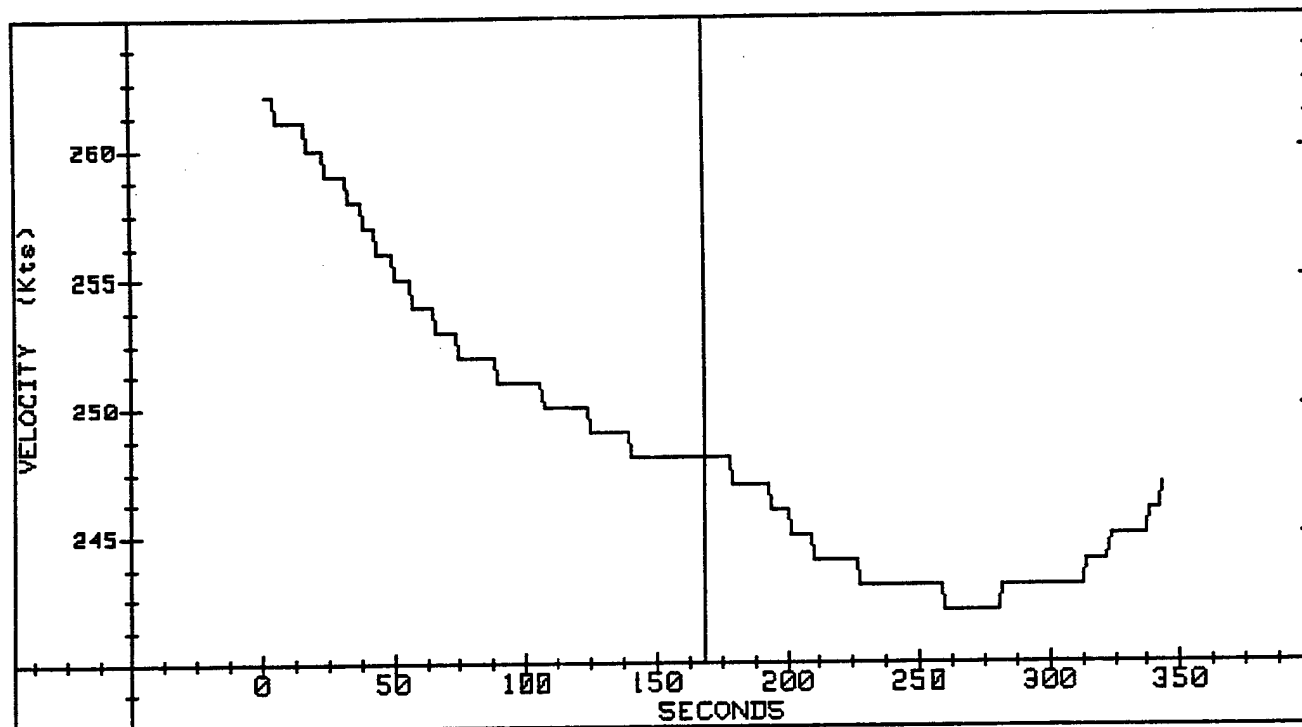
BARO ALTITUDE

DAY 17B TIME 1:21 PASS 20 m= 5829, sd= 4.3446



# INS GROUND SPEED

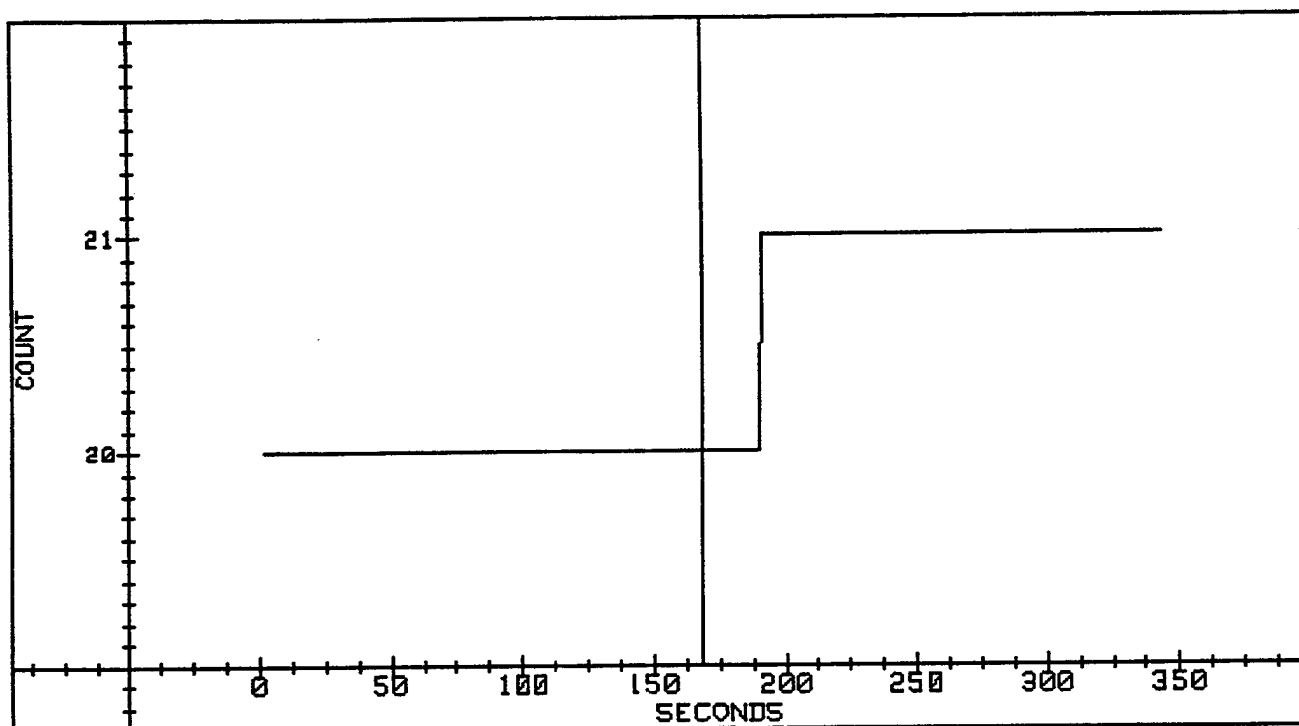
DAY 178 TIME 1:21 PASS 20 m= 243.9, sd= 1.46118





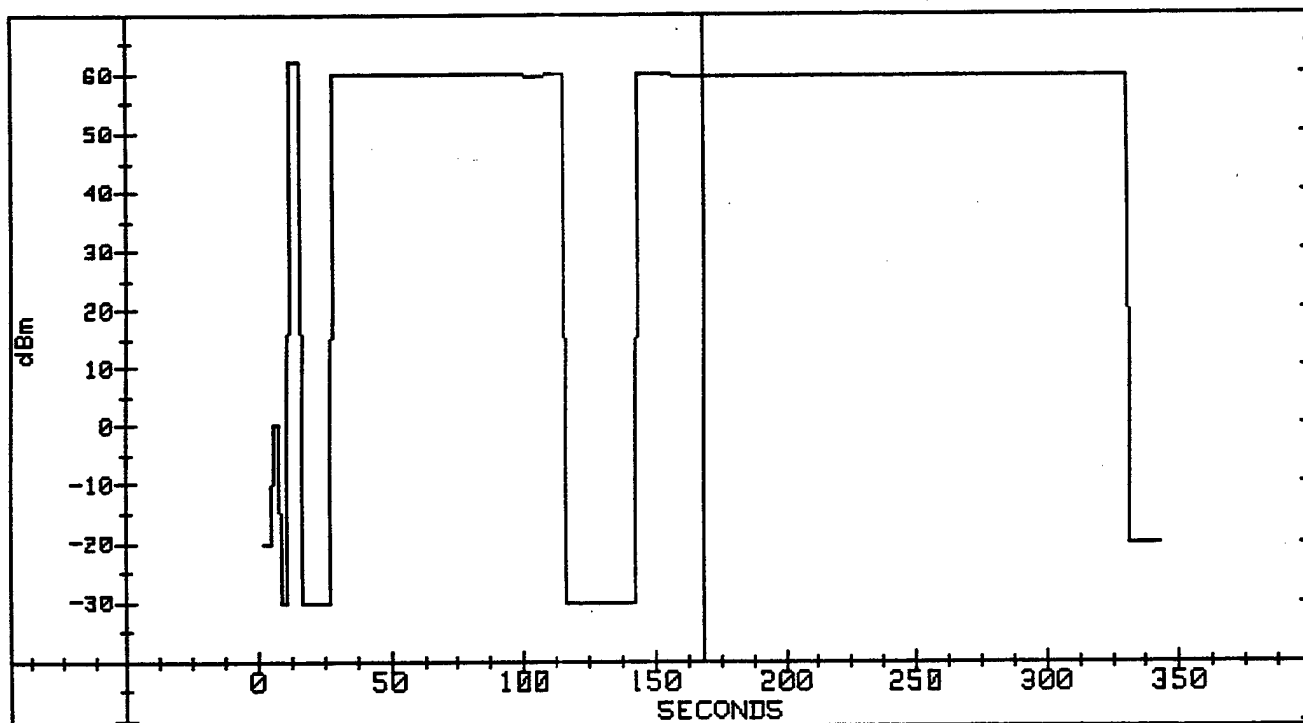
# PASS NUMBER

DAY 178 TIME 1:21 PASS 20 m= 20.94, sd= .239971



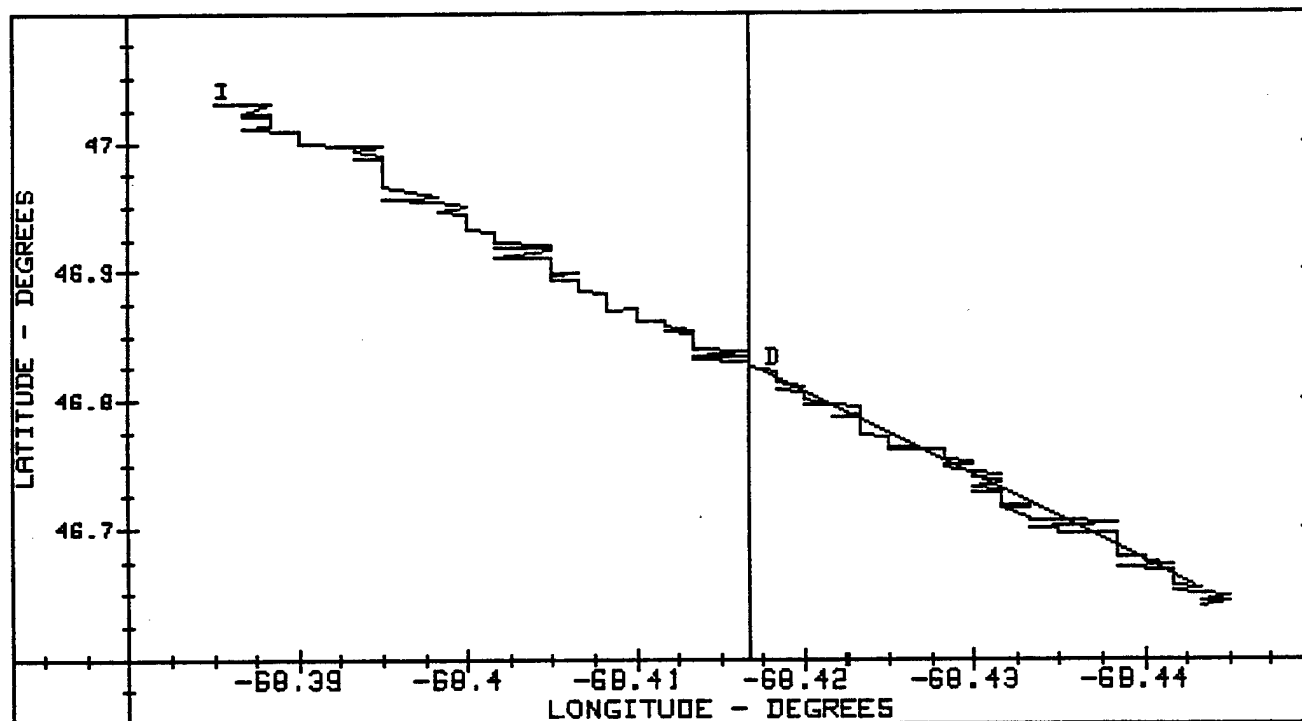
P Band Power

DAY 178 TIME 1:21 PASS 20 m= 53.23, sd= 21.5506



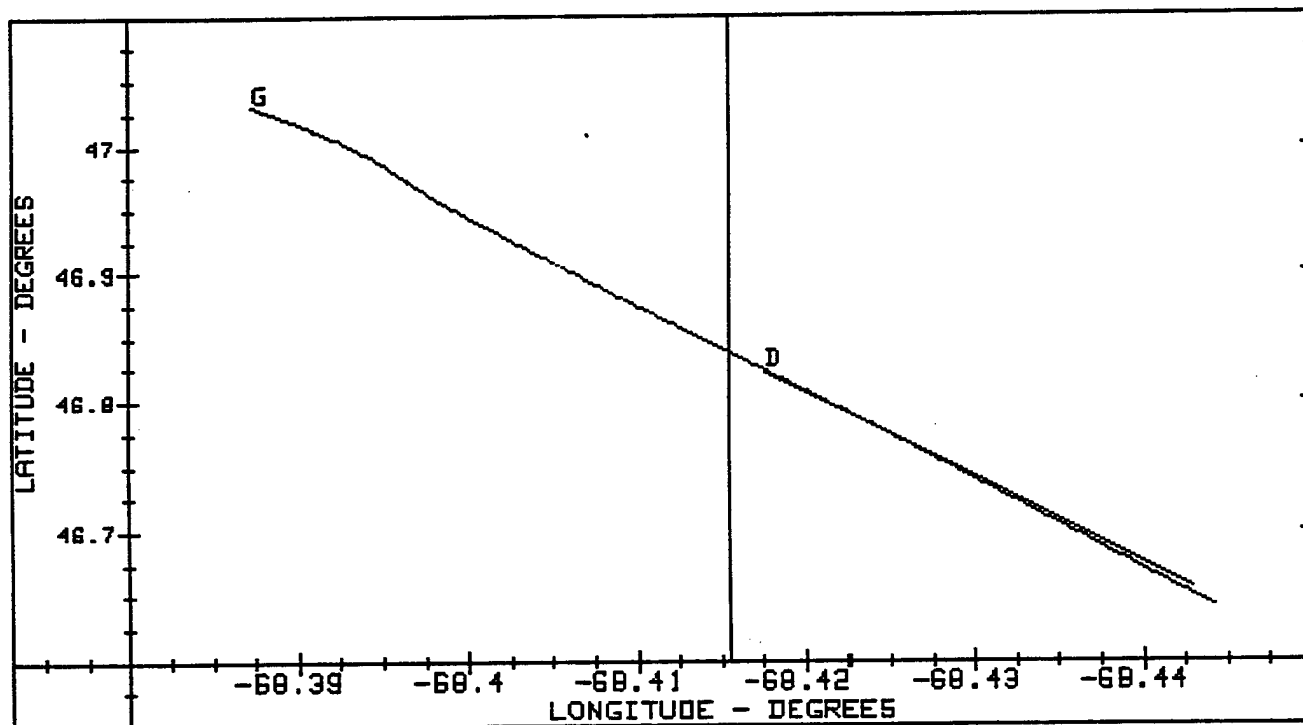
INS AIRCRAFT POSITION

DAY 170 TIME 1:21 PASS 20



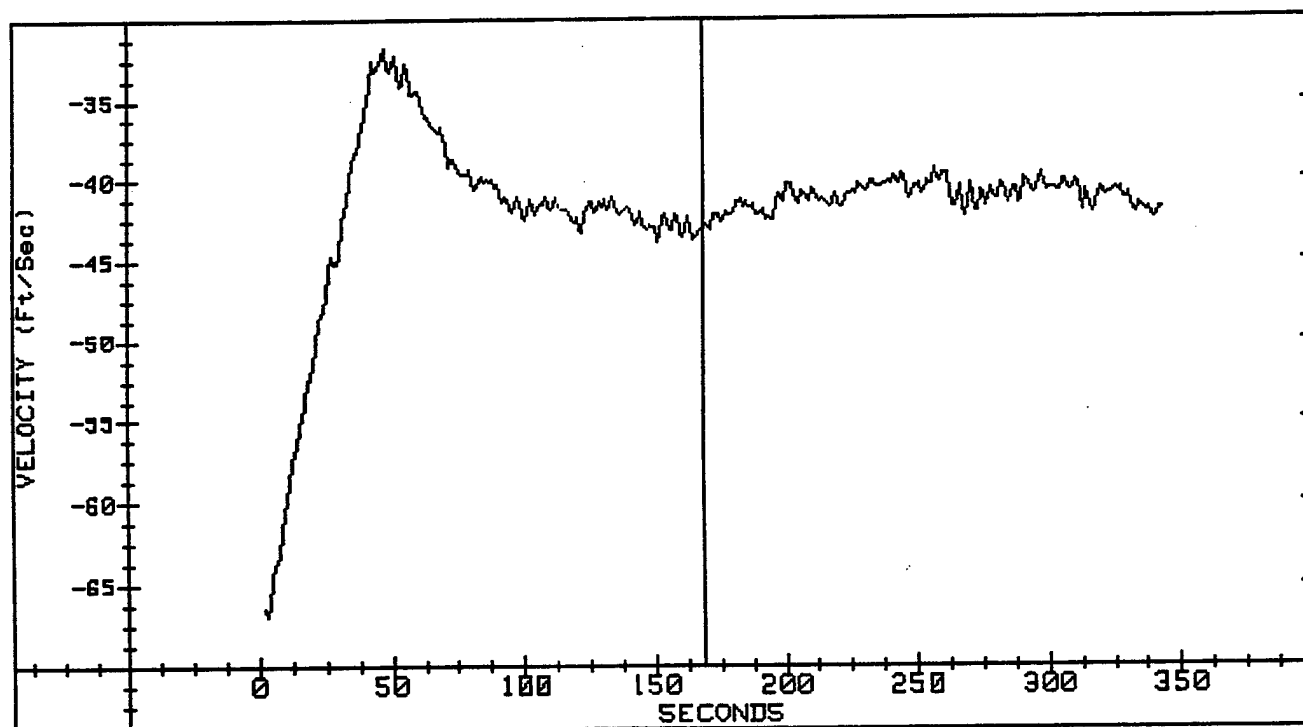
GPS AIRCRAFT POSITION

DAY 170 TIME 1:21 PASS 20



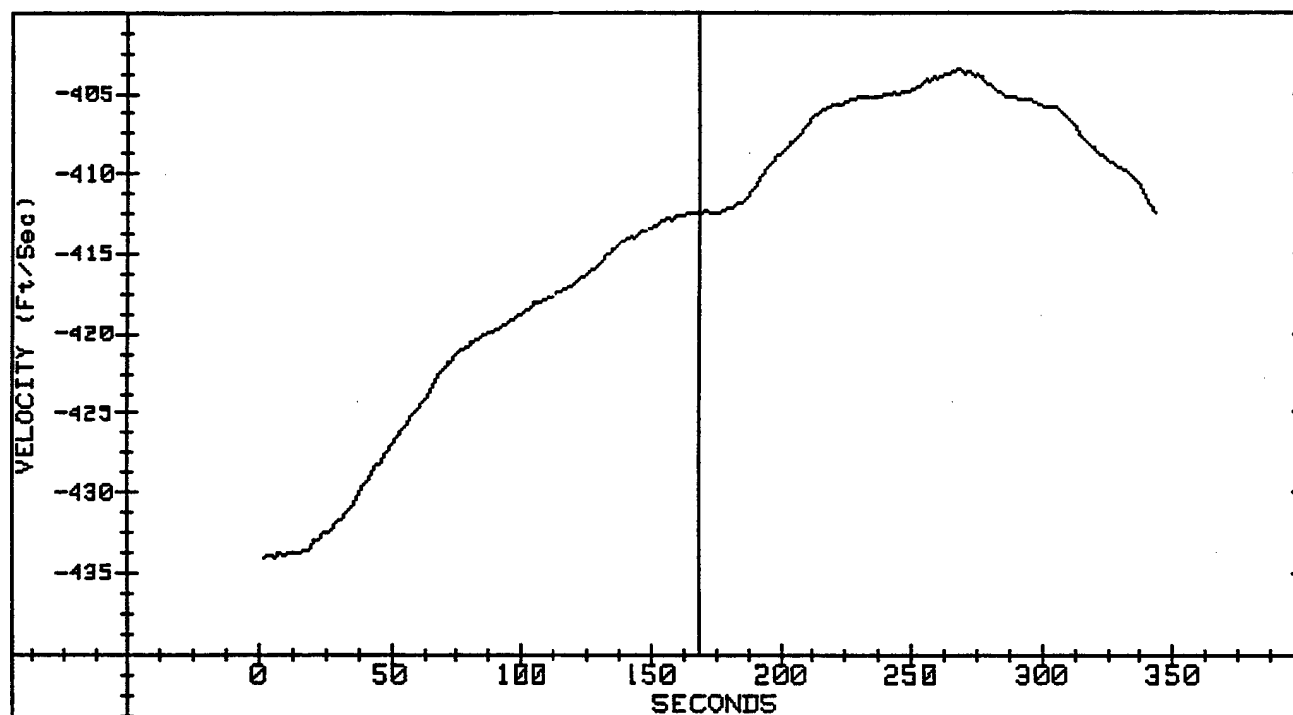
GPS V<sub>e</sub>

DAY 170 TIME 1:21 PASS 20  $m = -40.90$ ,  $sd = .607791$



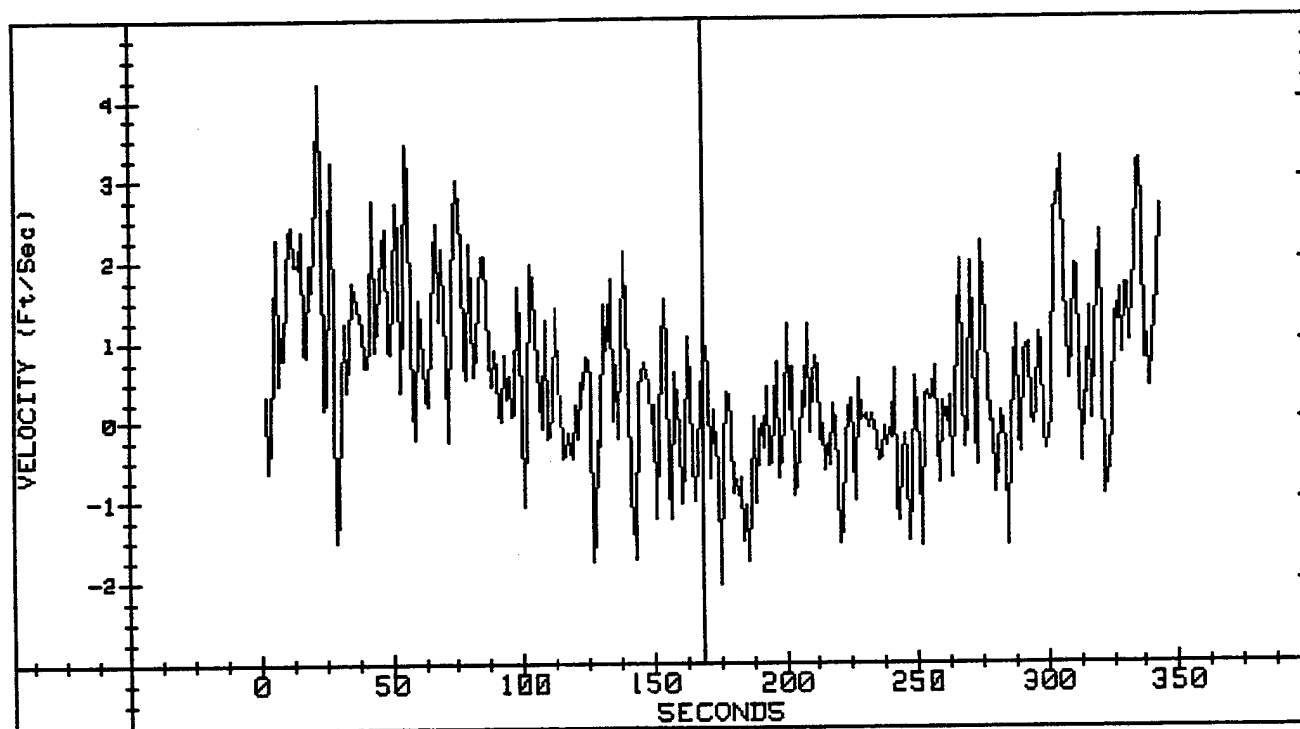
GPS Vn

DAY 170 TIME 1:21 PASS 20 m= -406.0, sd= 2.40451



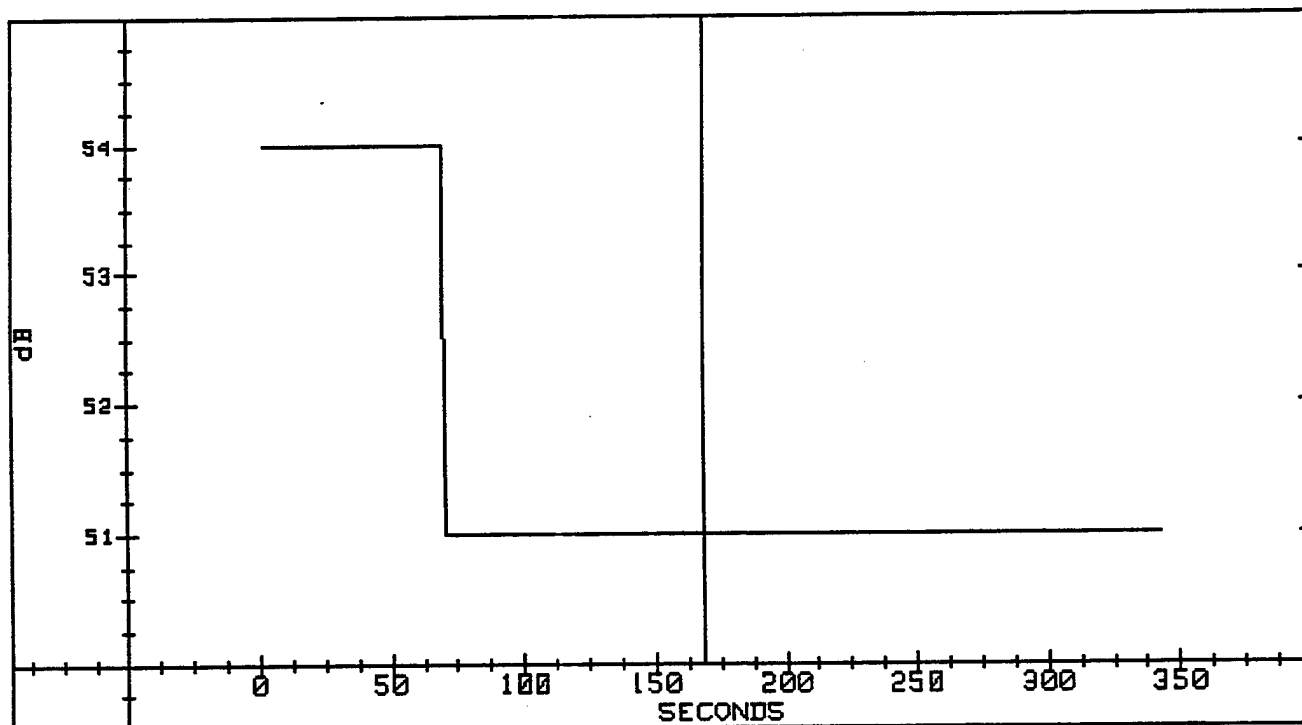
GPS Vv

DAY 178 TIME 1:21 PASS 20 m= .31, sd= 1.03601



Ch1 RES Attenuation

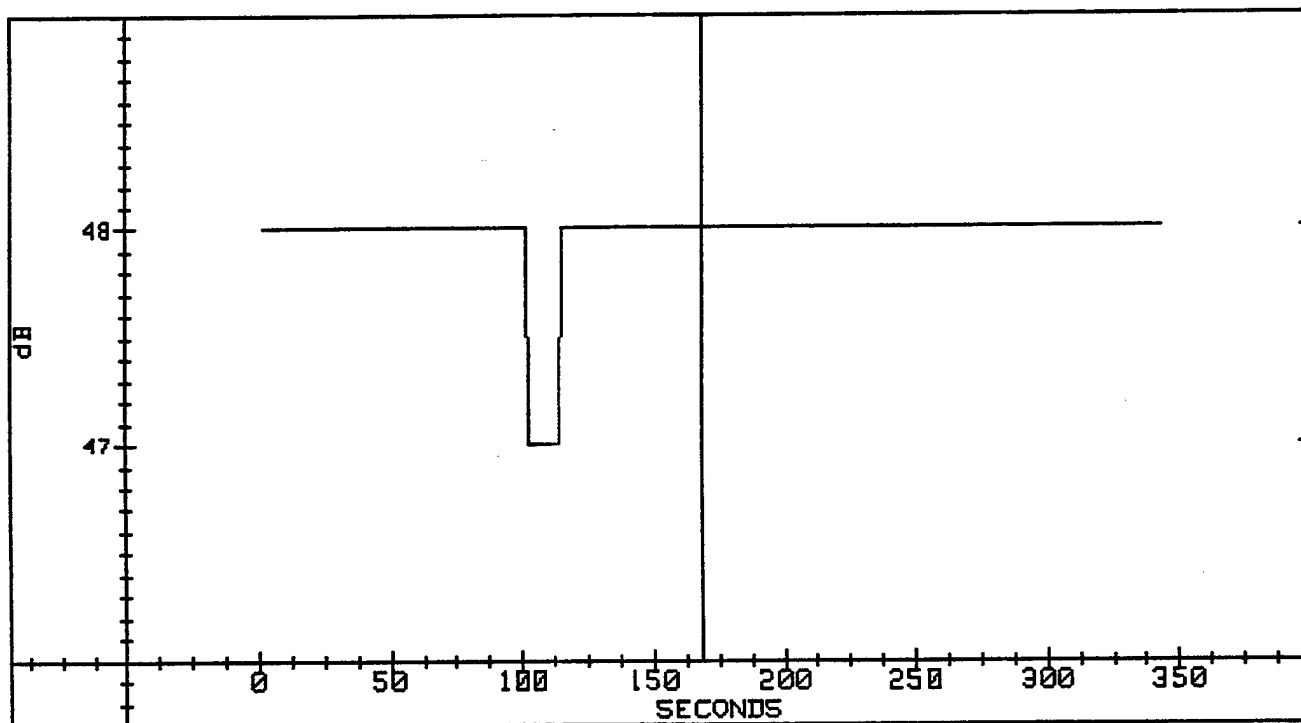
DAY 170 TIME 1:21 PASS 20 m= 51, sd= 0





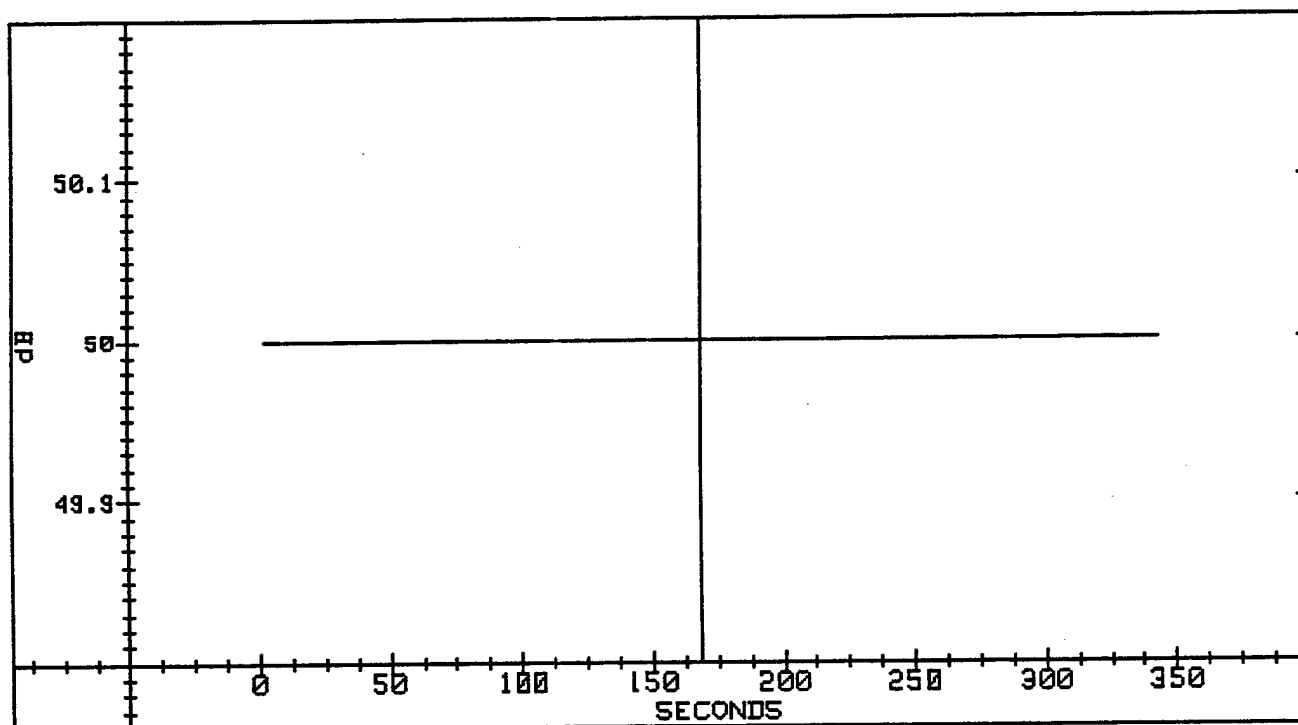
Ch2 RES Attenuation

DAY 178 TIME 1:21 PASS 20 m= 48, sd= 0



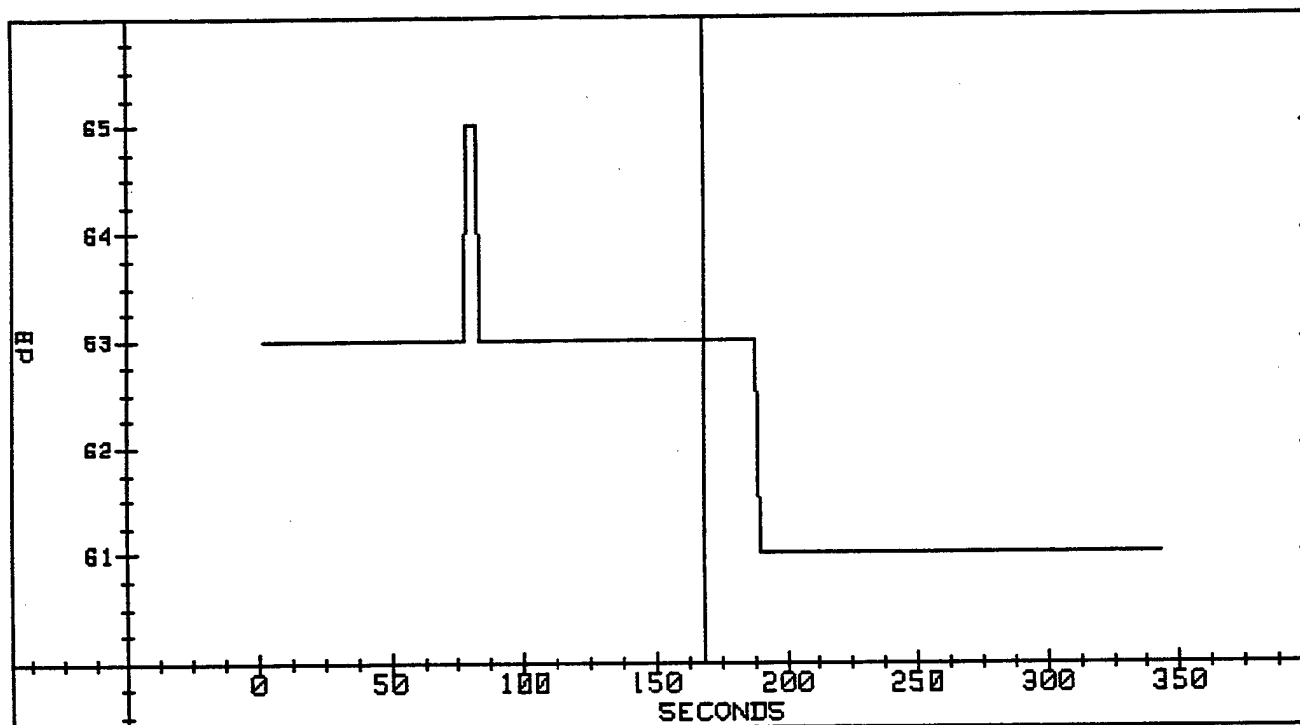
Ch3 RES Attenuation

DAY 170 TIME 1:21 PASS 20 m= 50, sd= 0



Ch4 RES Attenuation

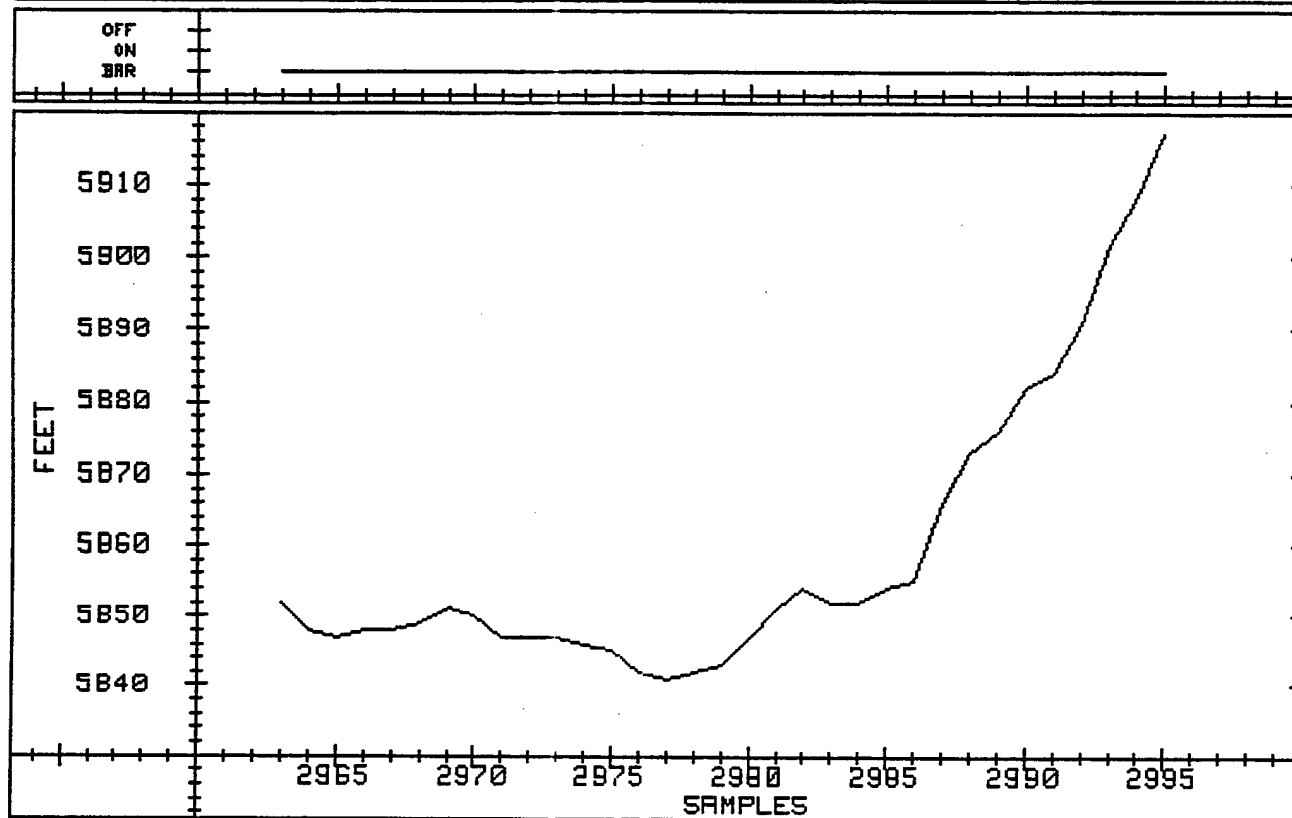
DAY 178 TIME 1:21 PASS 20 m= 61.1, sd= .437695



## GPS ALTITUDE

MEAN= 5859.3 STANDARD DEVIATION= 20.1892

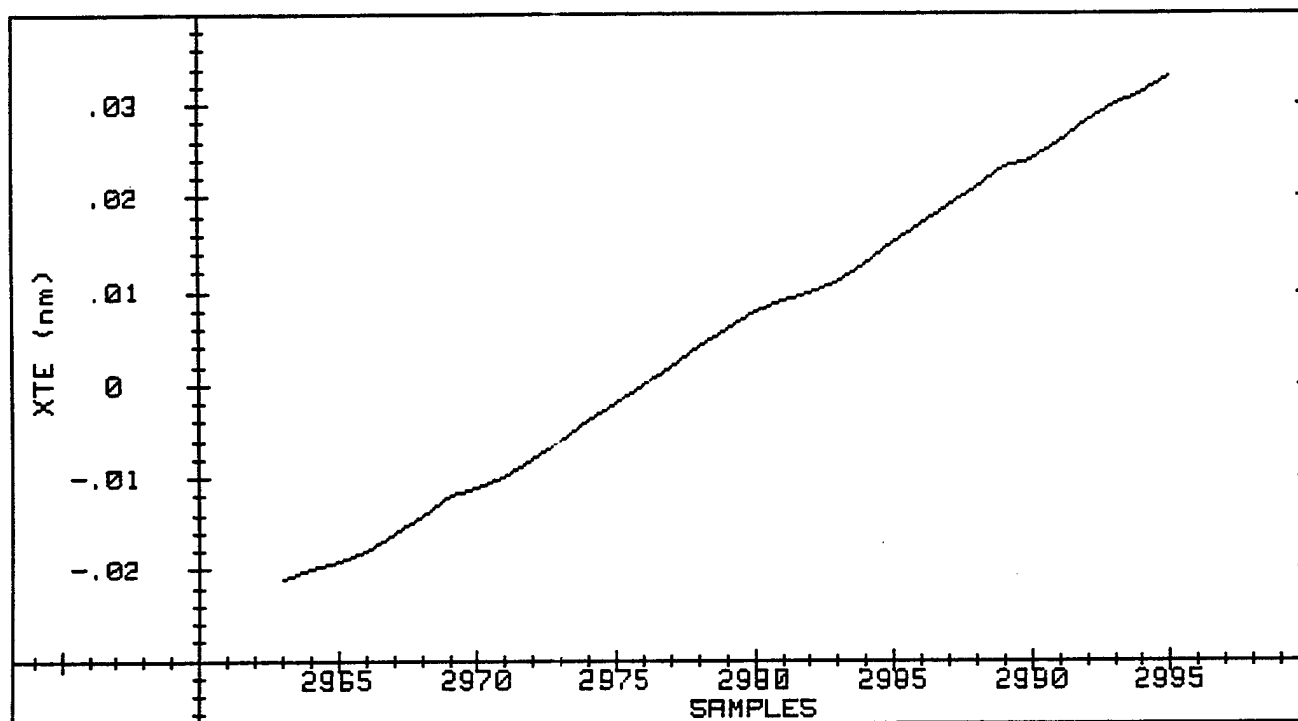
DATE: June 26, 1995 PASS 20



GPS Cross Track Error

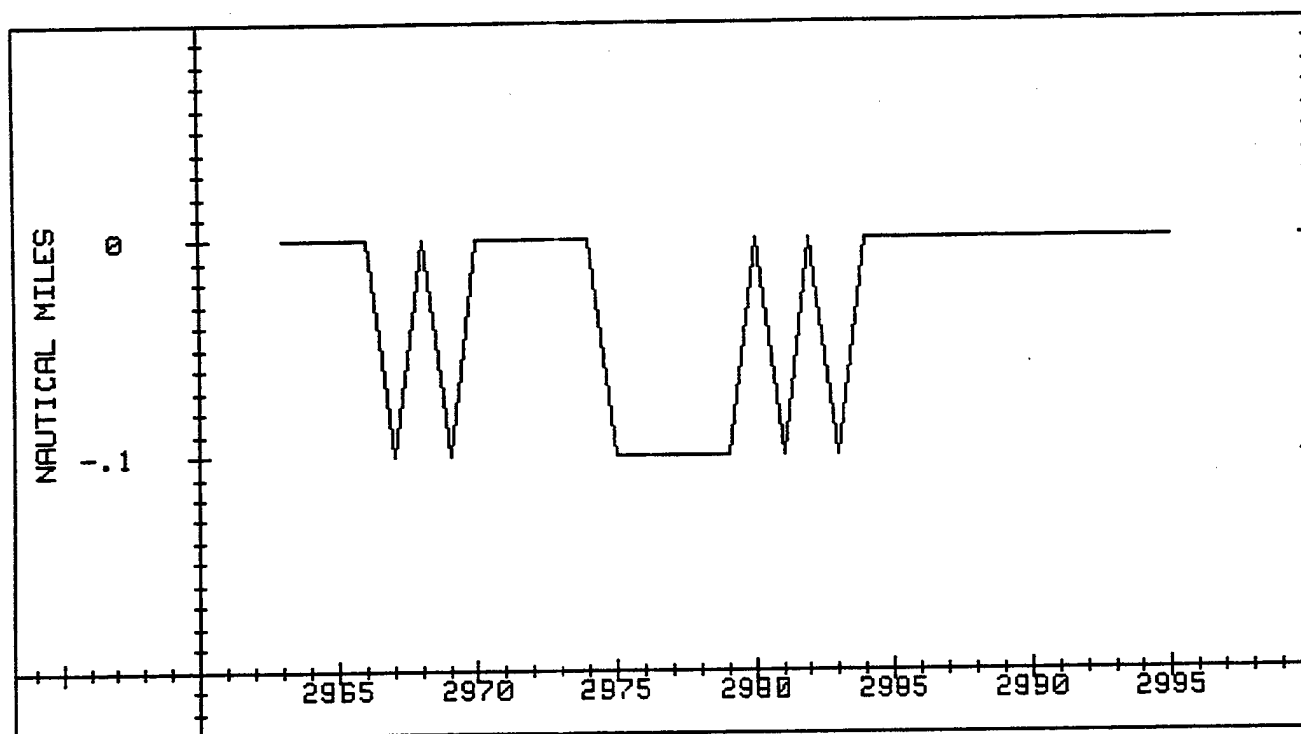
MEAN= .00512121 STANDARD DEVIATION= .0165324

DATE: June 26, 1995 PASS 20

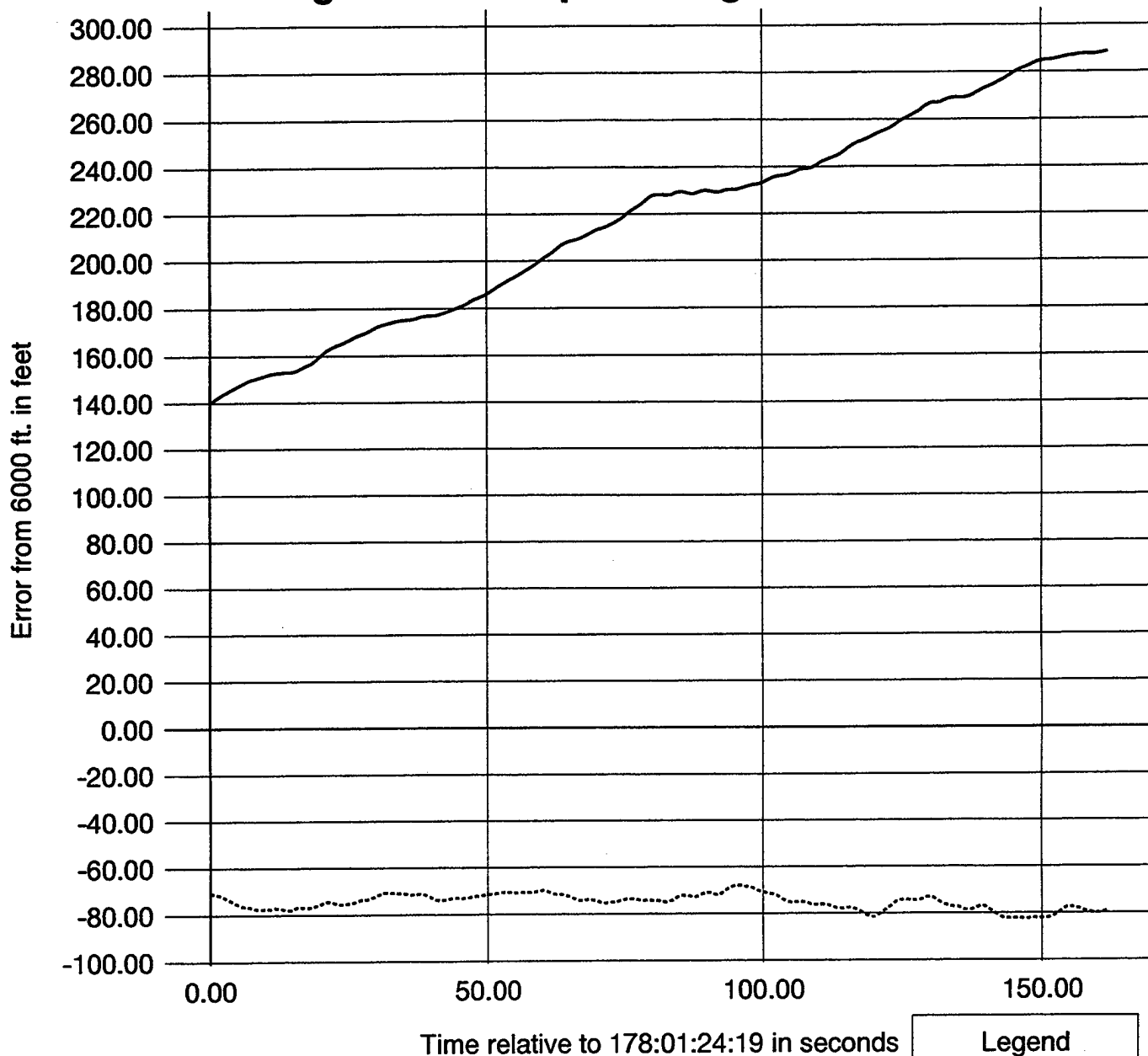


INS CROSS TRACK ERROR

MEAN= -.0272727      STANDARD DEVIATION= .0445362  
DATE: June 26, 1995      PASS 20



# **Portage, ME - June 26, 1995 - Pass 20 - Xtk. and Alt. Errors** **Higher alt. and port are greater than zero**



	Mean	St. Dev.
ALT.	-74.90	3.46
XTK.	218.50	44.01

Legend	
—	P5-xt
.....	P5-alt

27 Jun 1995  
Tape: E1423

Post-line Data Sheet  
Line 39  
Mission: PORTAGE MAINE, DAY

Time: 178:01:35:52  
Pass 22  
Req.# 21

#### AIRCRAFT & CHANNEL DATA

Altitude			CH 1	CH 2	CH 3	CH 4
Desired:	6000 ft	Wave/Pol.:	p-VV	p-VH	p-HV	p-HH
Baro:	5846 ft s.d.=	3 Swath Ctr Ang:	15.0°	15.0°	15.0°	15.0°
Slt. rng:	20632 ft	Tgt Dep Ang:	15.0°	15.0°	15.0°	15.0°
Look:	Right	St rng (ft):	19097	19097	19097	19097
Depr Ang:	25.0°	Near Rng Dep:	17.8°	17.8°	17.8°	17.8°
Des. trk:	336.0°	Far Rng Dep:	9.6°	9.6°	9.6°	9.6°
Start Sq:	90.0°	Atten (dB):	47.0	44.0	37.0	61.0
End Sq:	90.0°	RMS Video (%FS)	26.3	18.2	34.2	22.6

#### WAYPOINTS

Line_up:	N 46:27.86	W 68:24.91	Main Target:	GP
Start:	N 46:38.83	W 68:31.96	Mocomp Point:	
End:	N 46:47.96	W 68:37.88	Lat:	N 46:44.73
			Long:	W 68:30.56
From:	N 31:10.14	W 60:45.47	Tgt Trk:	0.0
To:	N 61:15.96	W 82:33.31	Tgt Vel:	0.0
			Alt:	660.0 ft

#### RADAR PARAMETERS - for UWB

RTP Channel:	1	Filter damping is Hi	->	10 sec
Resolution:	N/A	PRF Factor is FAST	(262.5 kts)	-
Swath width:	Single	Ave Gndspd:	Real	->
RMS Time Constant:	2^7	Mocomp Off for Chnl	1, 2, 3, 4	
Position Reference:	ON	GPS Vel/Pos Reference		
Atten. Tracking:	OFF	Adj Gnd Scene:	5000.0 ft	
Range Gate Delta:	0.0 ft	Range Tracking is	OFF	
Azimuth Presum Rate:	Presum6	Clutterlock Reference:	OFF	
TX Chirp Filename:	CTL1U2B	RX Chirp Filename:	CRL1N0A	
Ave Ref Vel ->	-.8 fps (s.d.=	.9)		
Ave Fil Vel ->	-2.0 fps (s.d.=	.8)		

NML XMIT PWR	ANT BIAS	Tape Footage	Drive no.
X: -70.0	Elevation:	0.0°	
L: -70.0	Azimuth:	0.0°	Starting: 5221 ft (1)
C: -70.0	Pitch:	0.0°	Ending: 6487 ft (1)
P: 46.5			

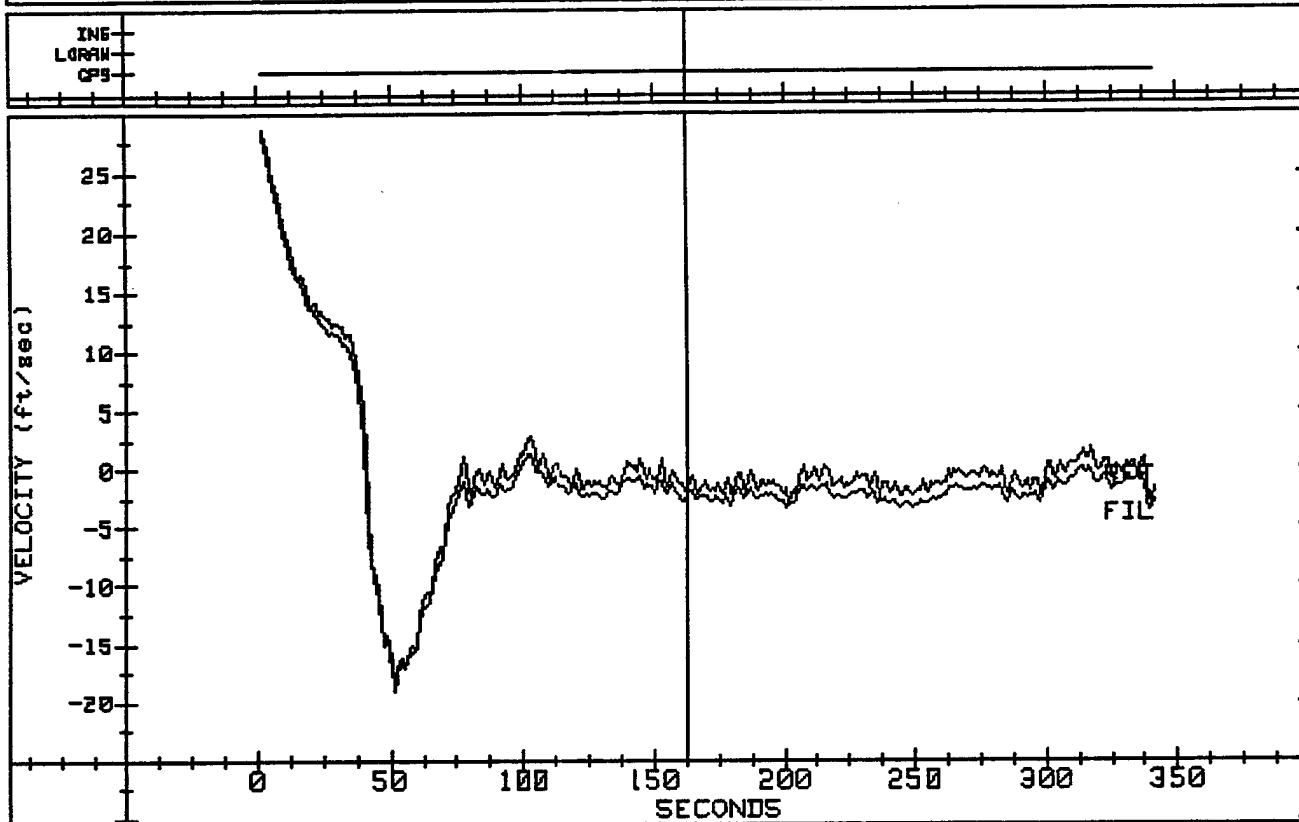
Vel Bias	CAL Atten	LINE Map Time (UCT)
X: 1035.0	X: 63.8 dB	Start: 01:35:52
Y: -433.0	L: 63.8 dB	End: 01:38:37
Z: 6697.0	C: 63.8 dB	

#### Mocomp Counters

Start:	1255642	001328DAh	CPA (UCT):	00:00:00
End:	1283311	001394EFh	Alt:	0 ft (GPS)
			Lat:	N 0:00: 0
			Lon:	E 0:00: 0

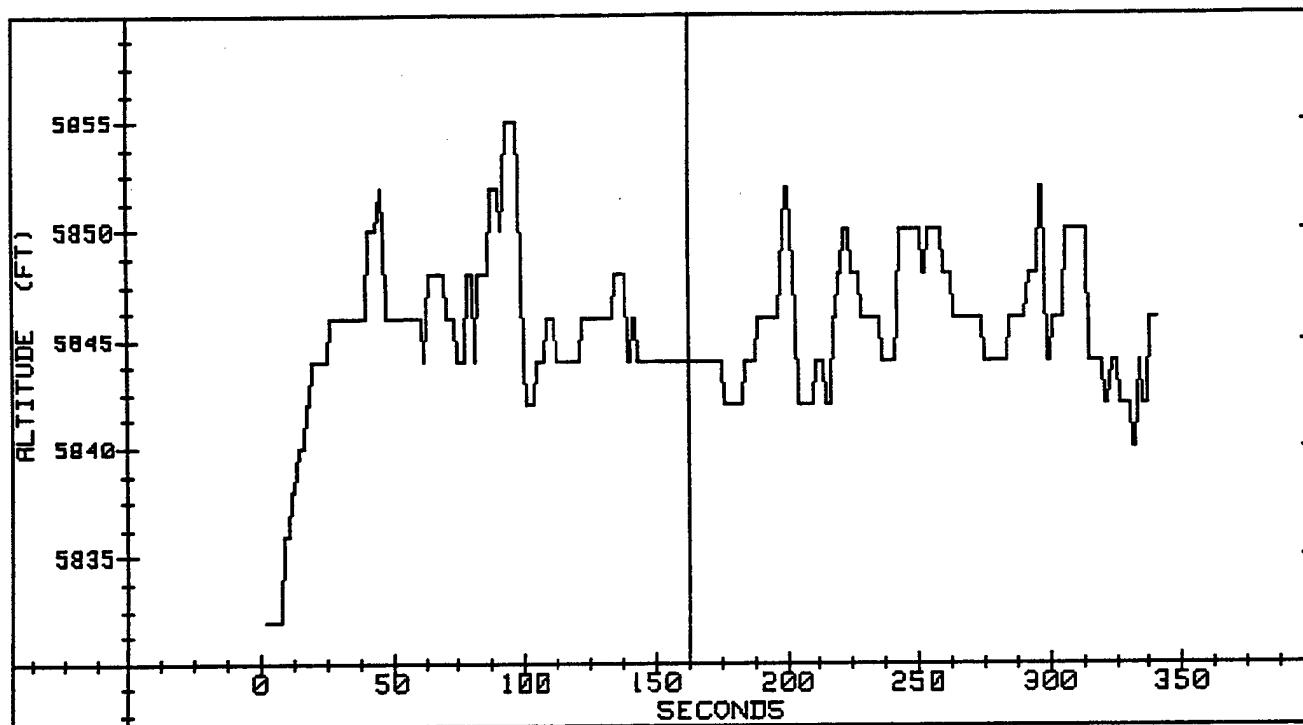


FILTERED vs. REF. VELOCITY  
DAY 178 TIME 1:32 PASS 22



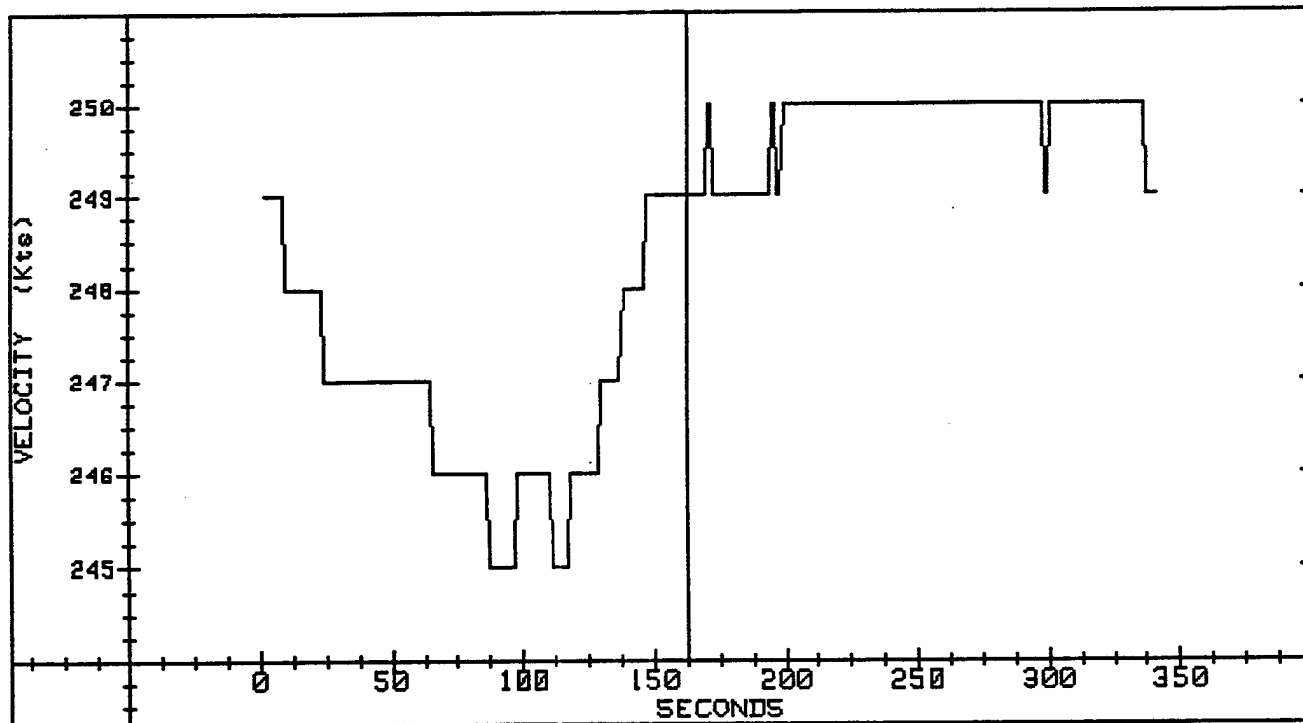
BARO ALTITUDE

DAY 178 TIME 1:32 PASS 22 m= 5846. sd= 2.84391



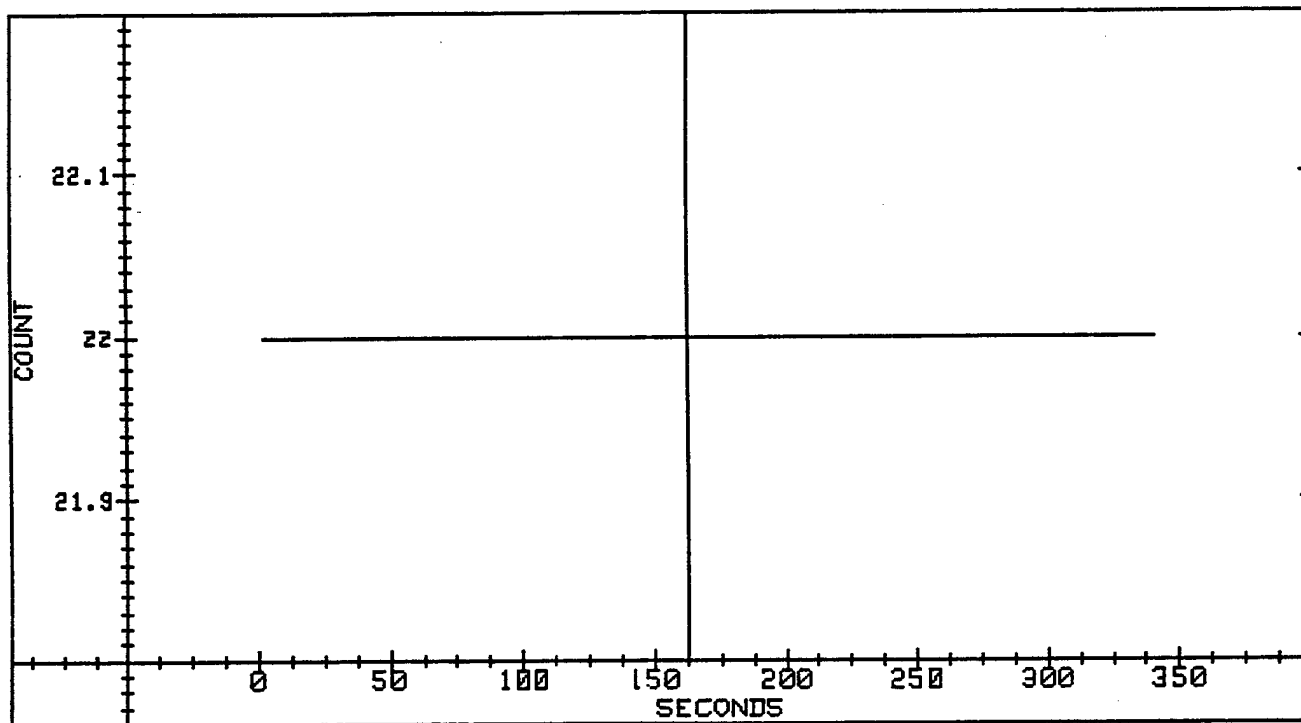
INS GROUND SPEED

DRY 178 TIME 1:32 PASS 22 m= 249.8, sd= .374464



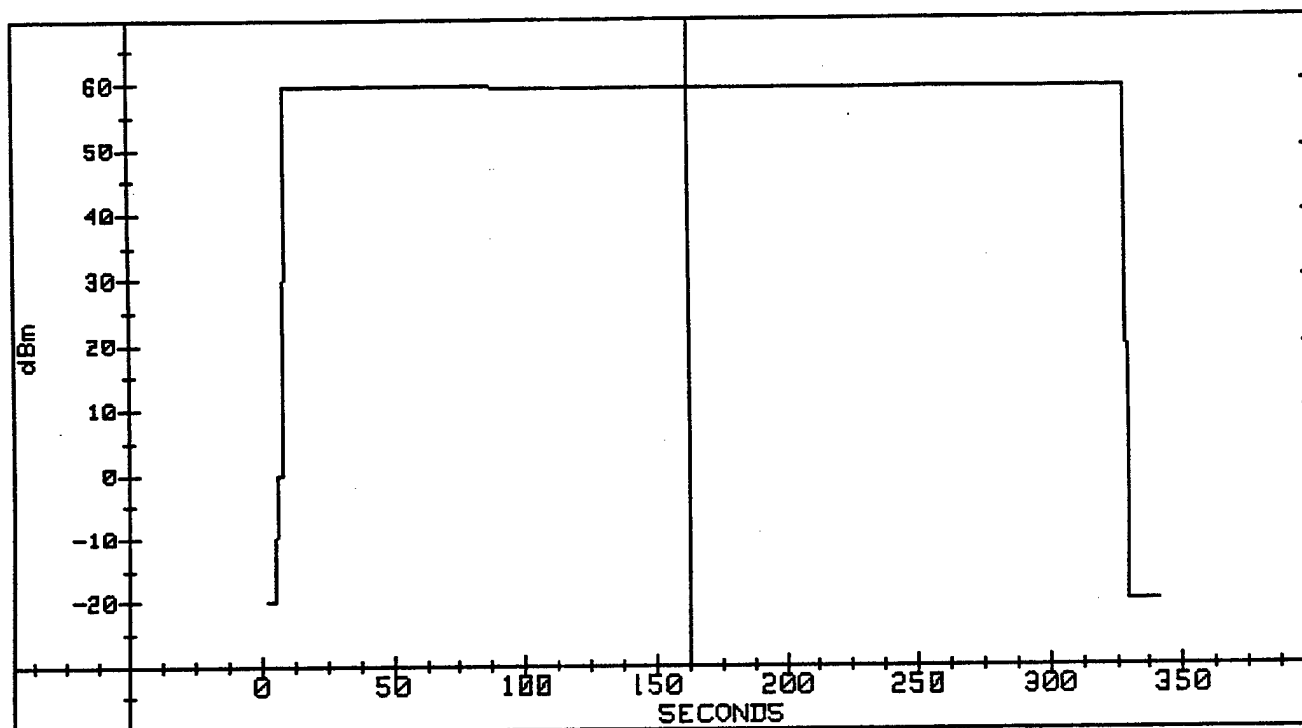
# PASS NUMBER

DAY 179 TIME 1:32 PASS 22 m- 22, sd- 0



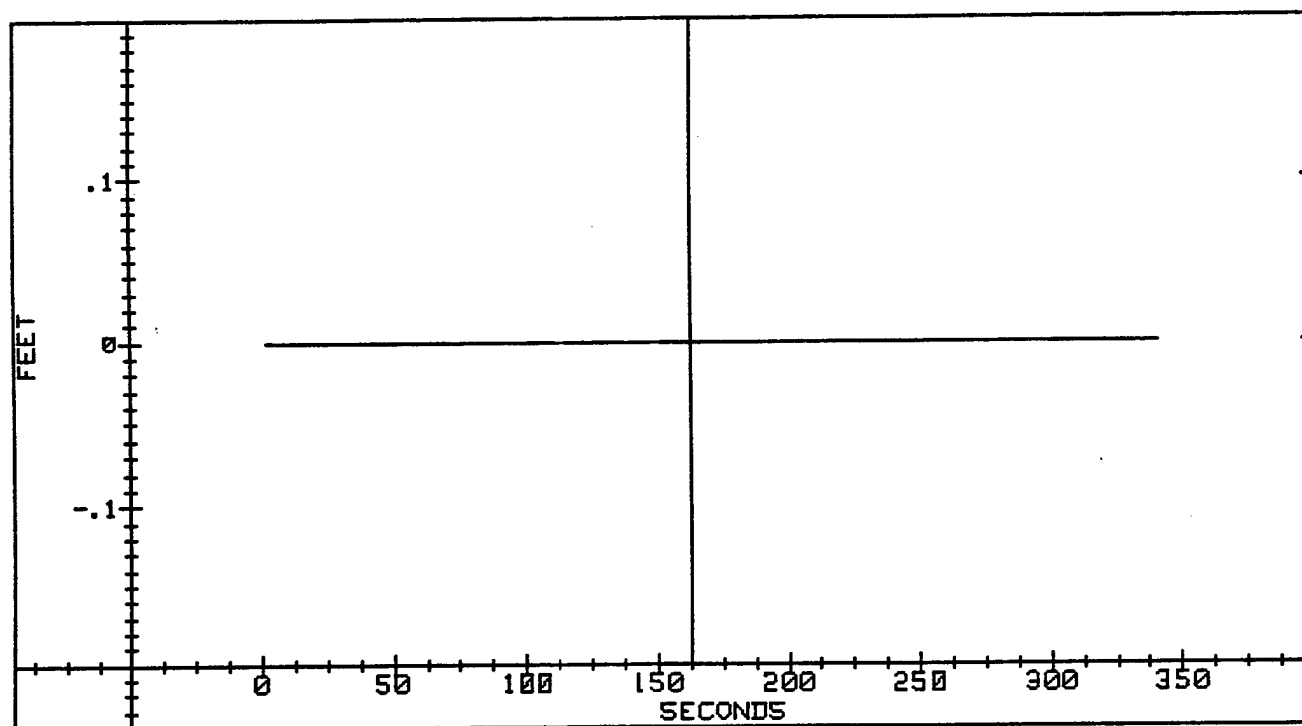
P Band Power

DAY 178 TIME 1:32 PASS 22 m= 53.06. sd= 21.2951



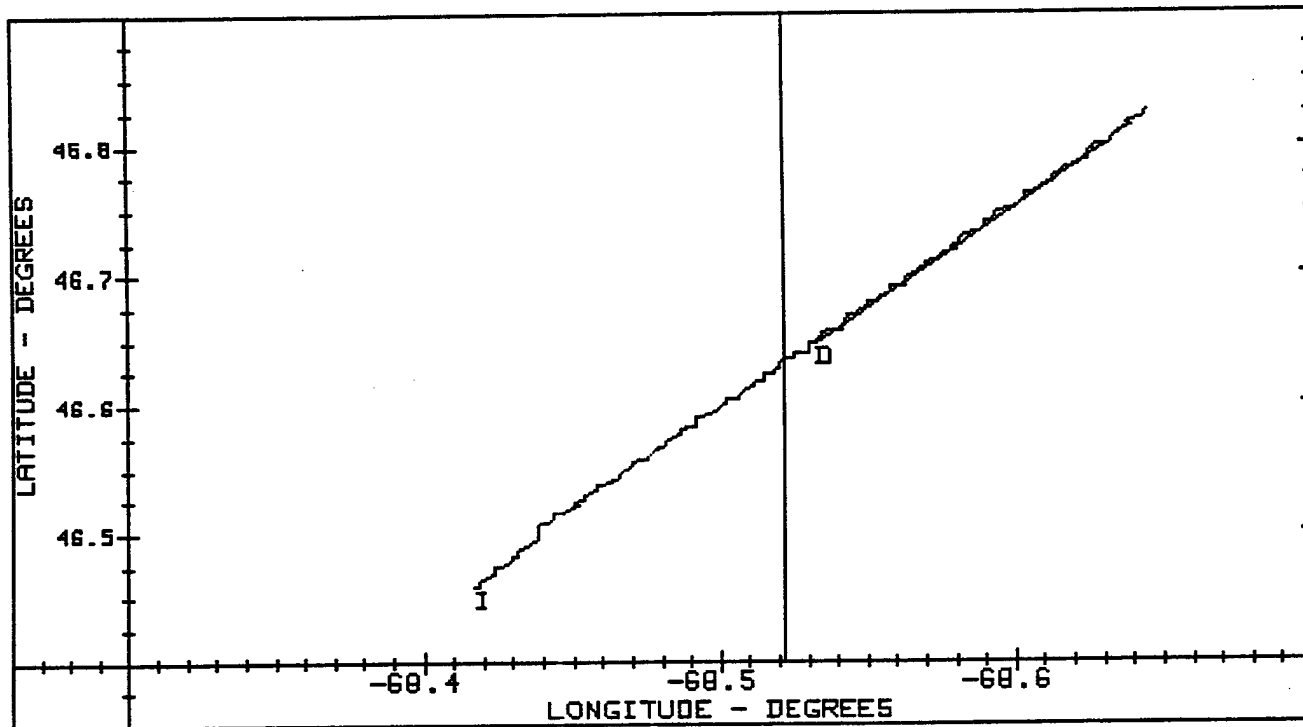
## GPS ALTITUDE

DAY 178 TIME 1:32 PASS 22 m= 0, sd= 0



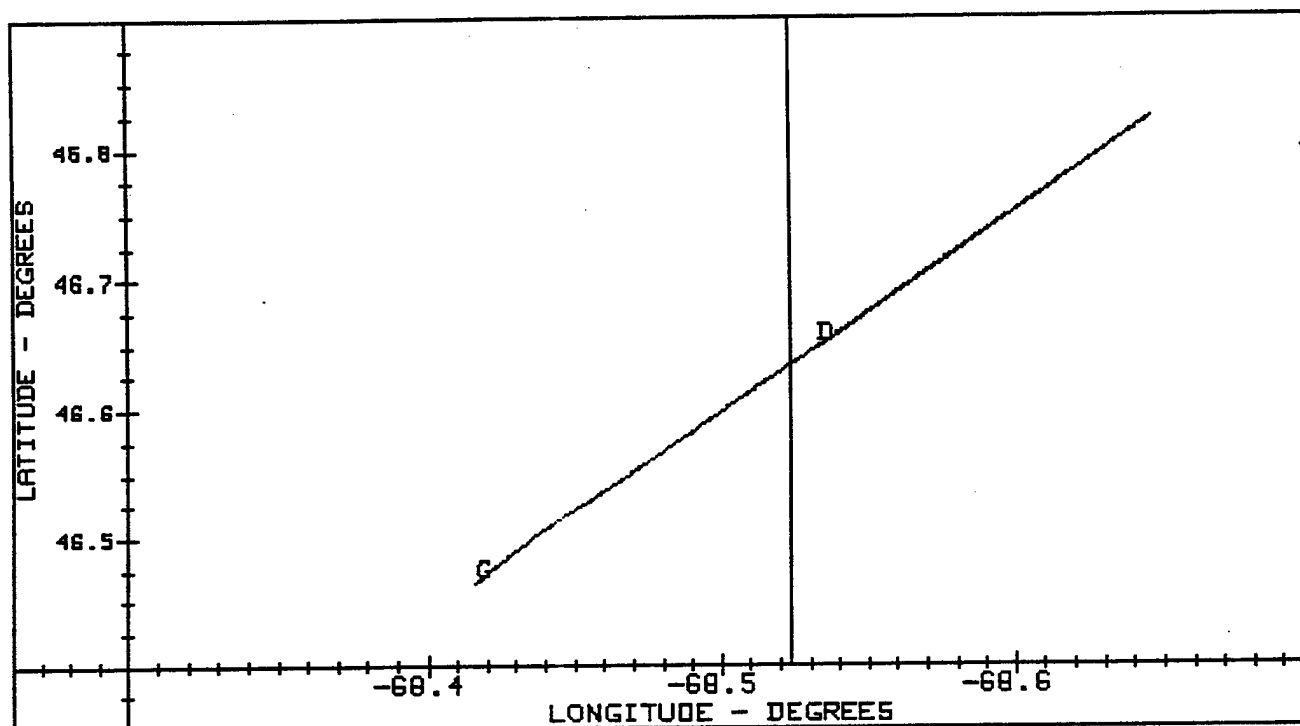
INS AIRCRAFT POSITION

DAY 170 TIME 1:32 PASS 22



GPS AIRCRAFT POSITION

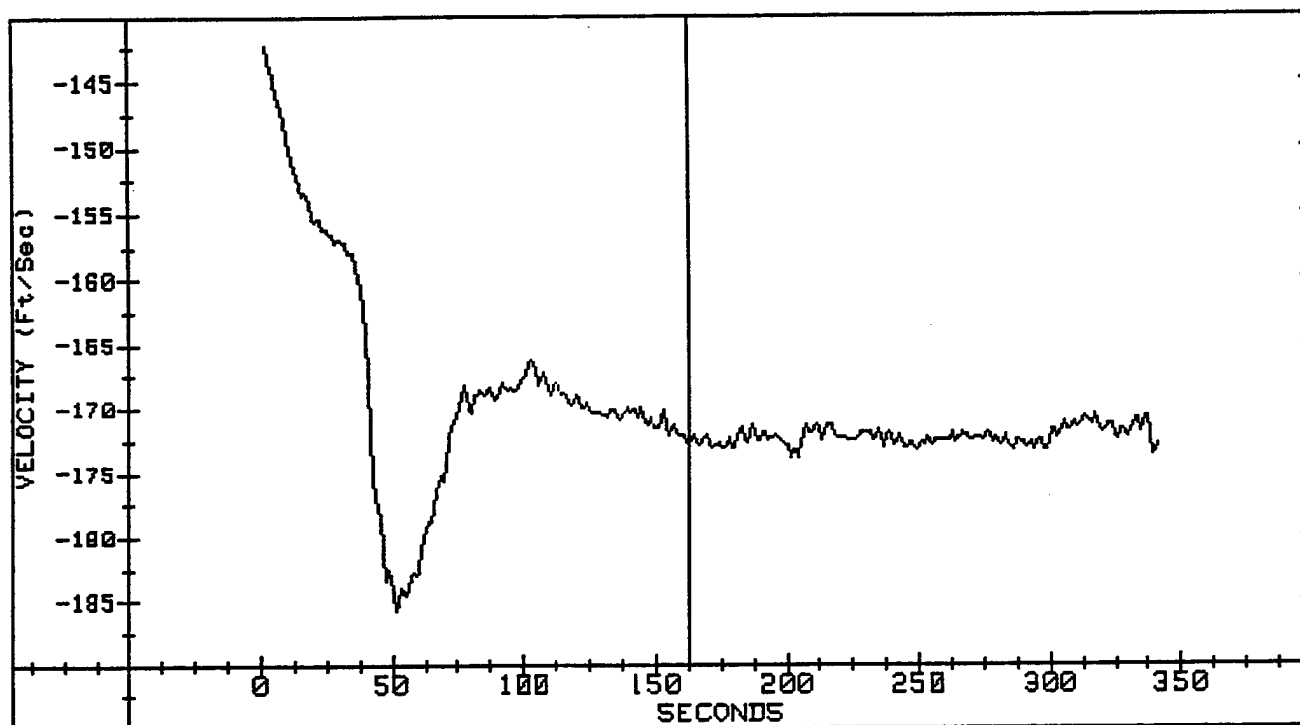
DAY 170 TIME 1:32 PASS 22





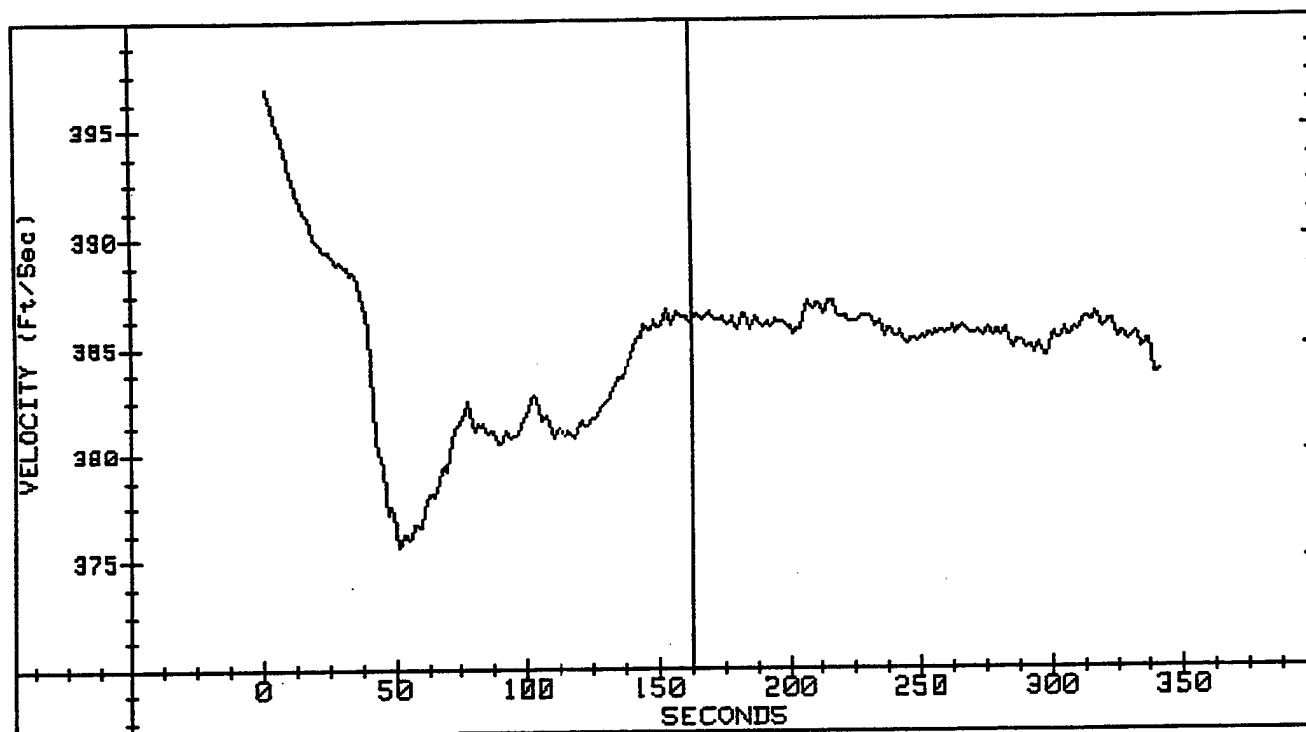
GPS V<sub>e</sub>

DAY 170 TIME 1:32 PASS 22 m= -172.2, sd= .659381



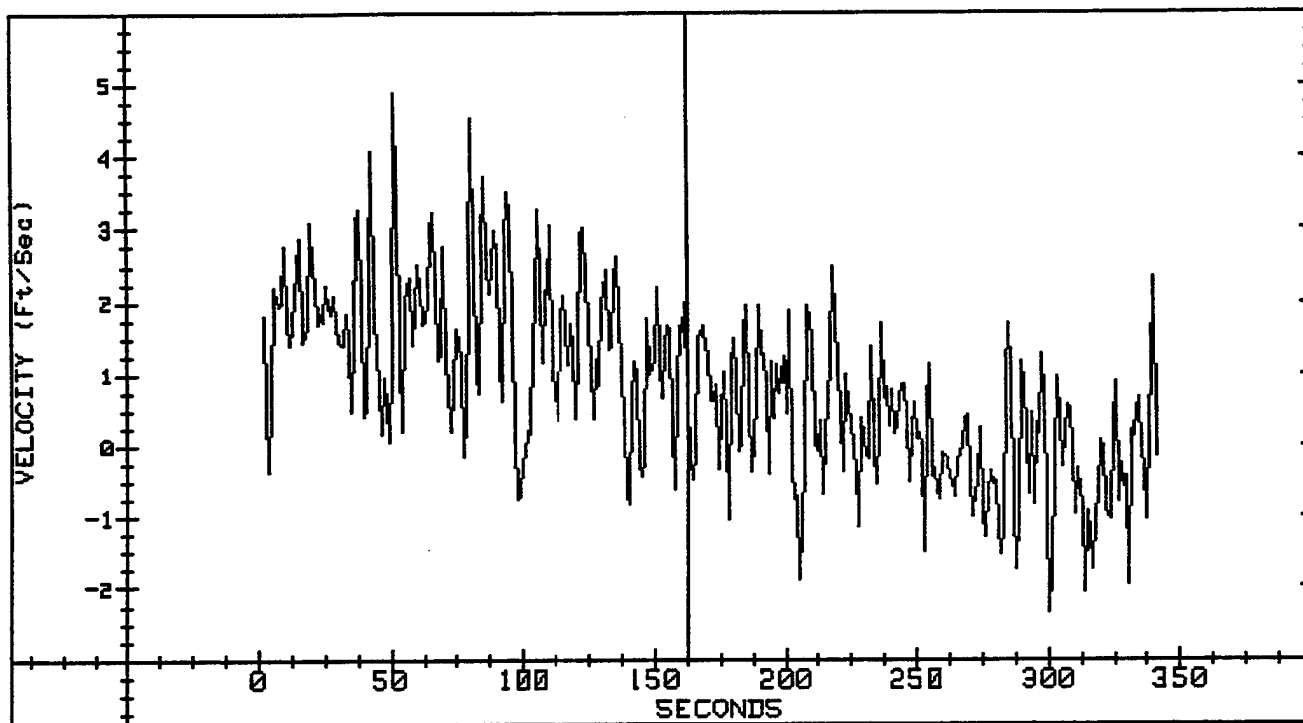
GPS Vn

DRY 178 TIME 1:32 PASS 22 m= 385.8, sd= .607759



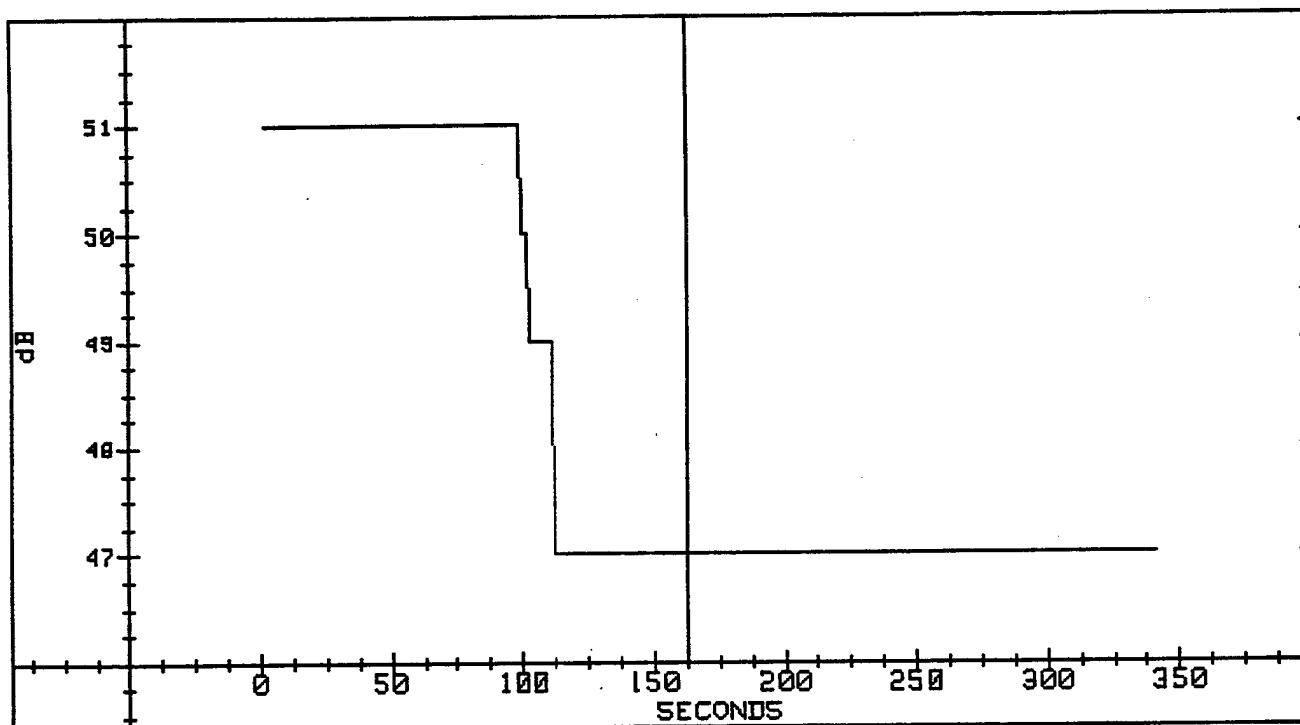
GPS Vv

DAY 178 TIME 1:32 PASS 22 m= .07587, sd= .930928



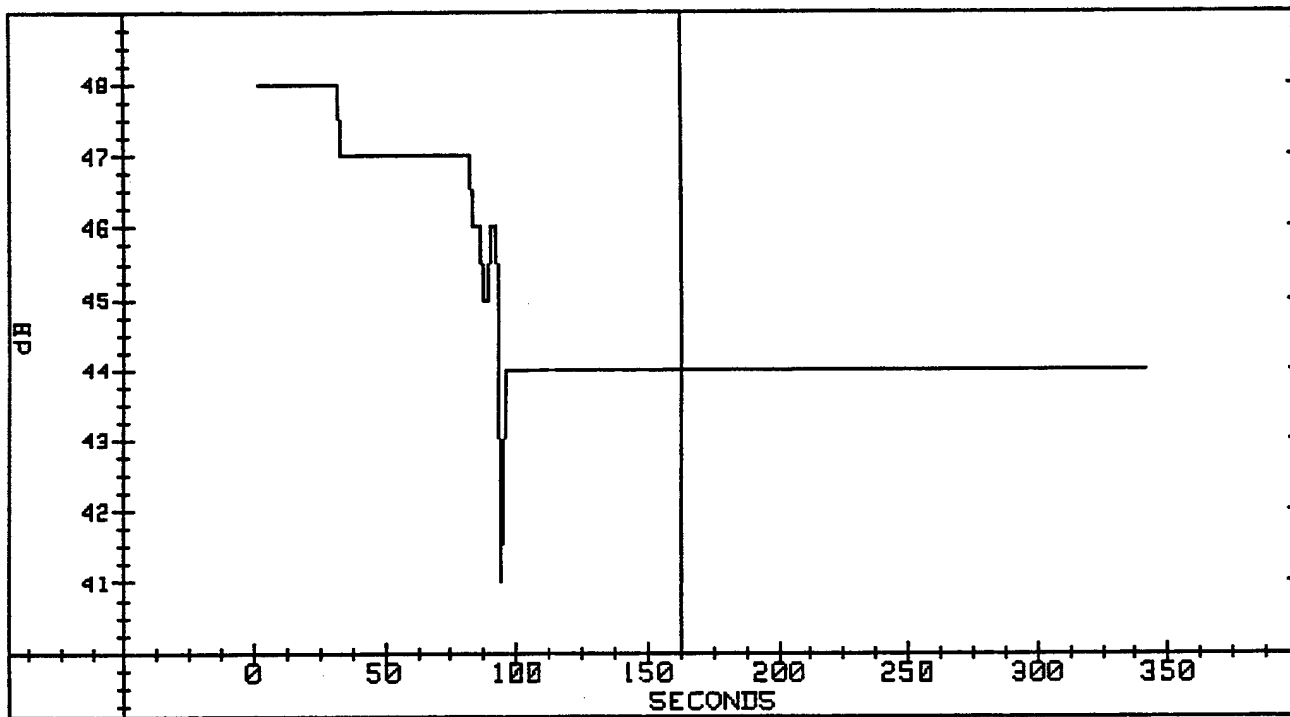
Ch1 RES Attenuation

DAY 178 TIME 1:32 PASS 22 m= 47, sd= 0



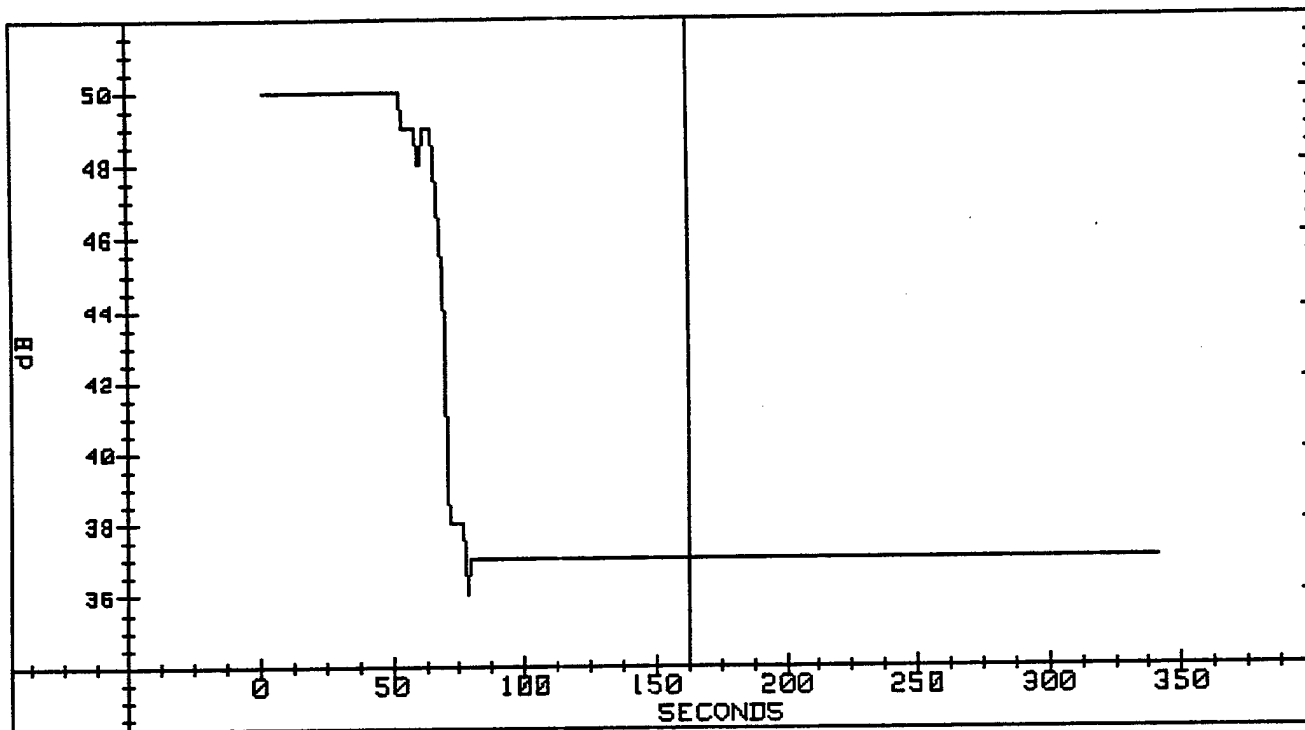
Ch2 RES Attenuation

DAY 178 TIME 1:32 PASS 22 m= 44, sd= 0



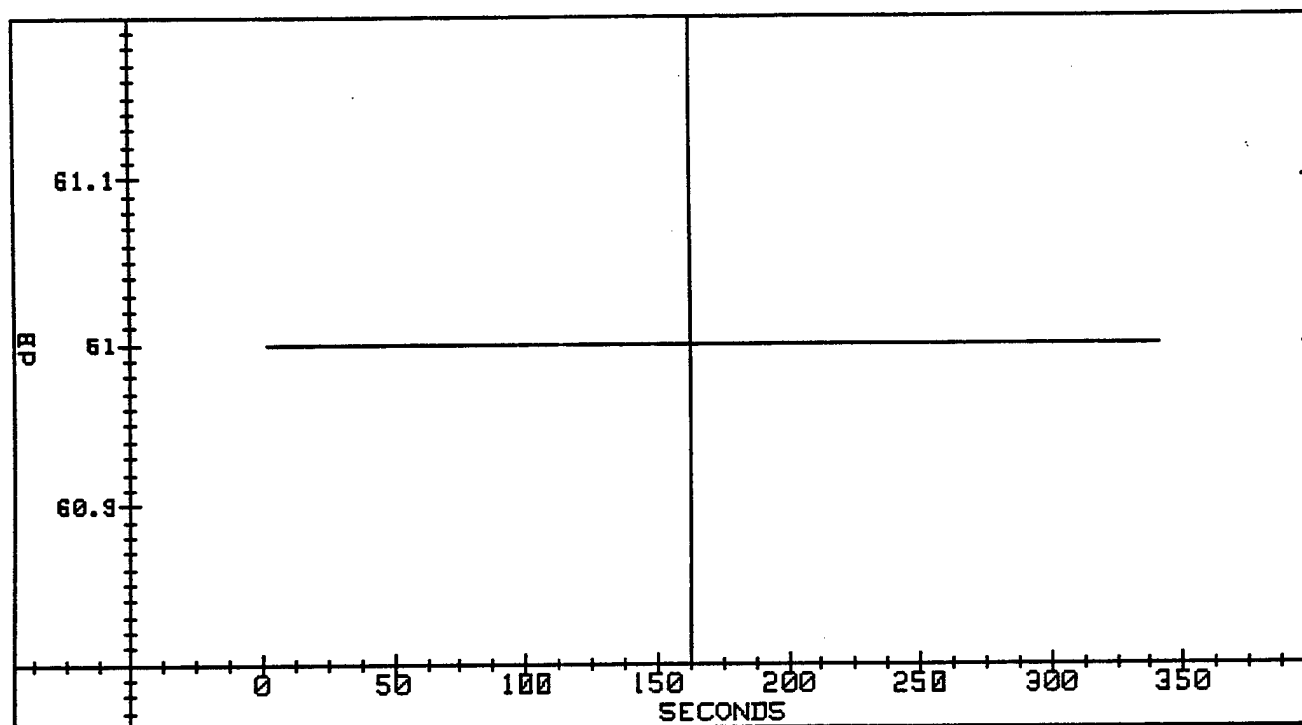
Ch3 RES Attenuation

DAY 170 TIME 1:32 PASS 22 m- 37, sd- 0



Ch4 RES Attenuation

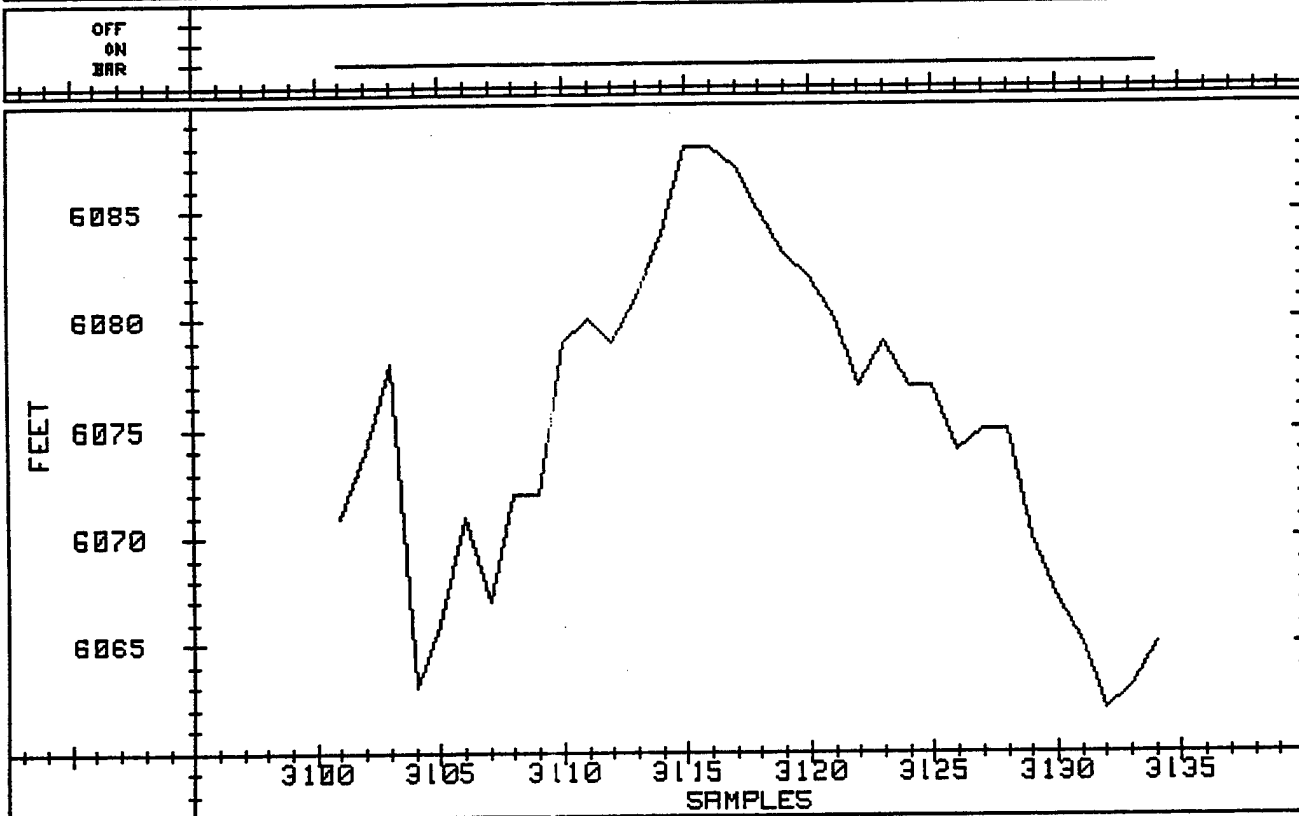
DAY 178 TIME 1:32 PASS 22 m= 61, sd= 0



GPS ALTITUDE

MEAN= 6075.18 STANDARD DEVIATION= 7.42203

DATE: June 26, 1995 PASS 22

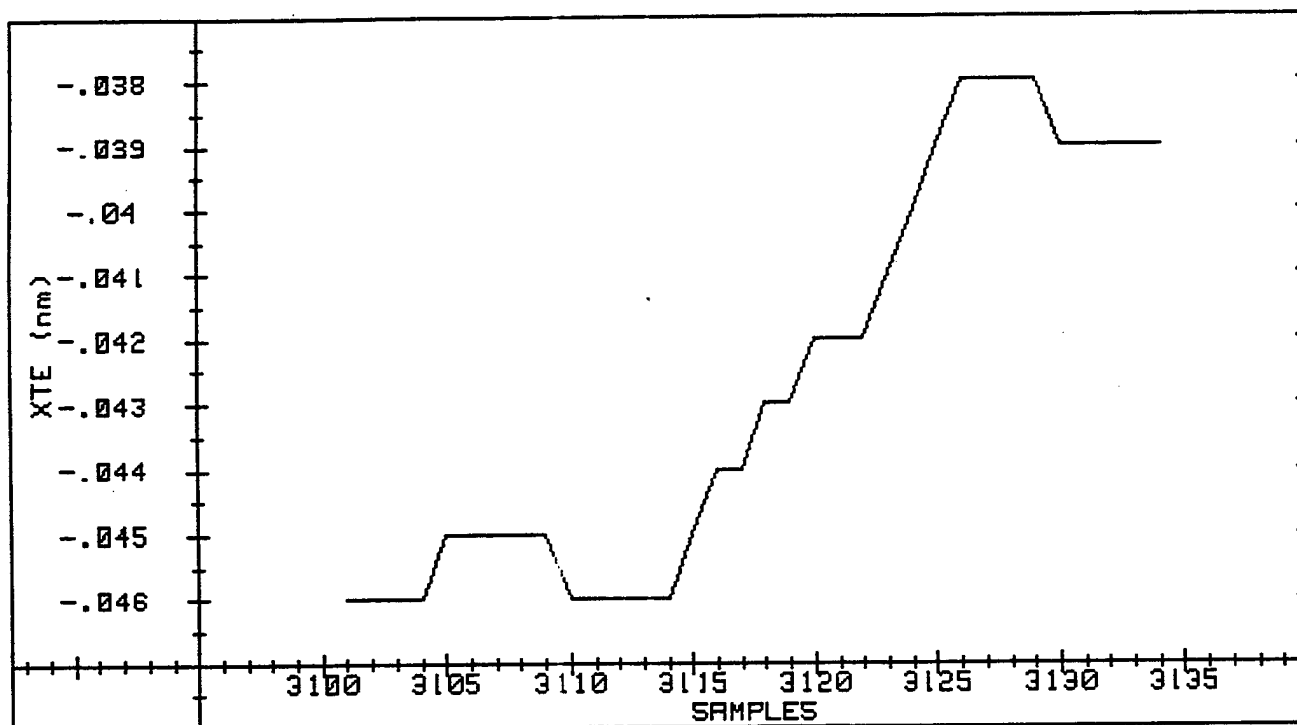




# GPS Cross Track Error

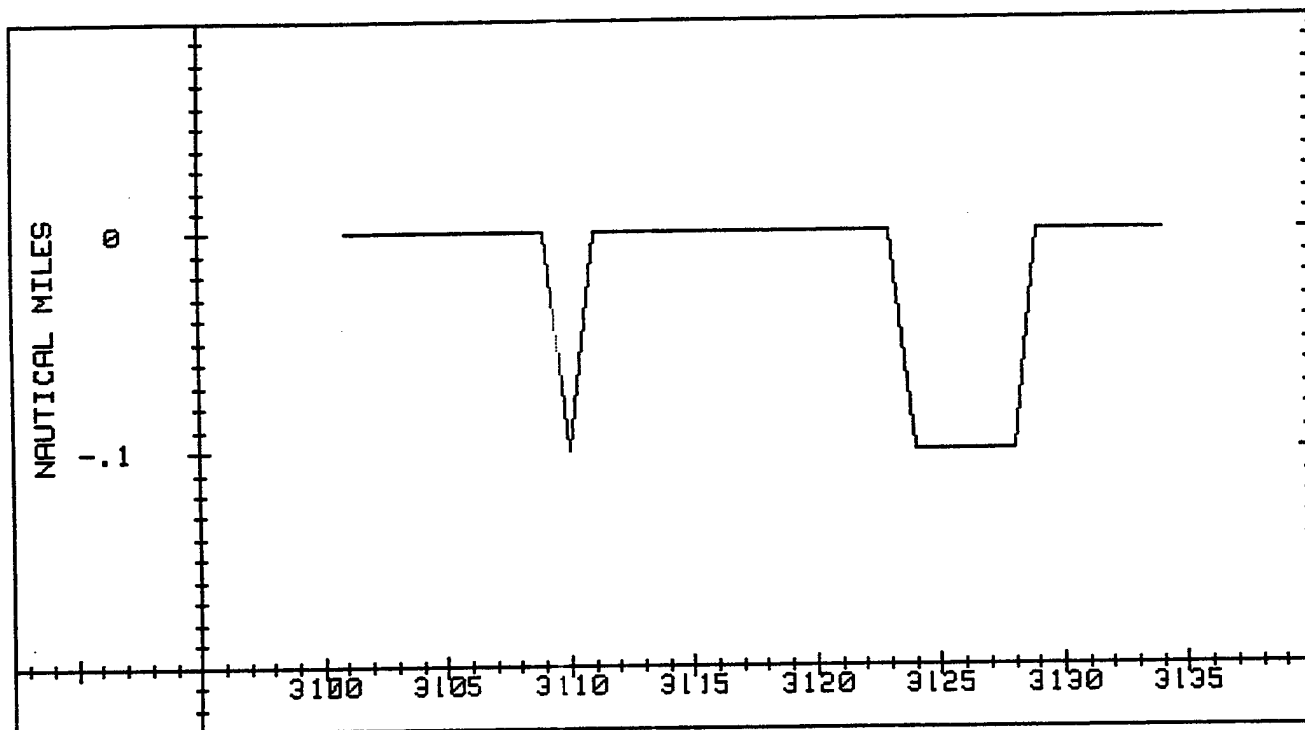
MEAN= -.0426765      STANDARD DEVIATION= .00304593

DATE: June 26, 1995      PASS 22

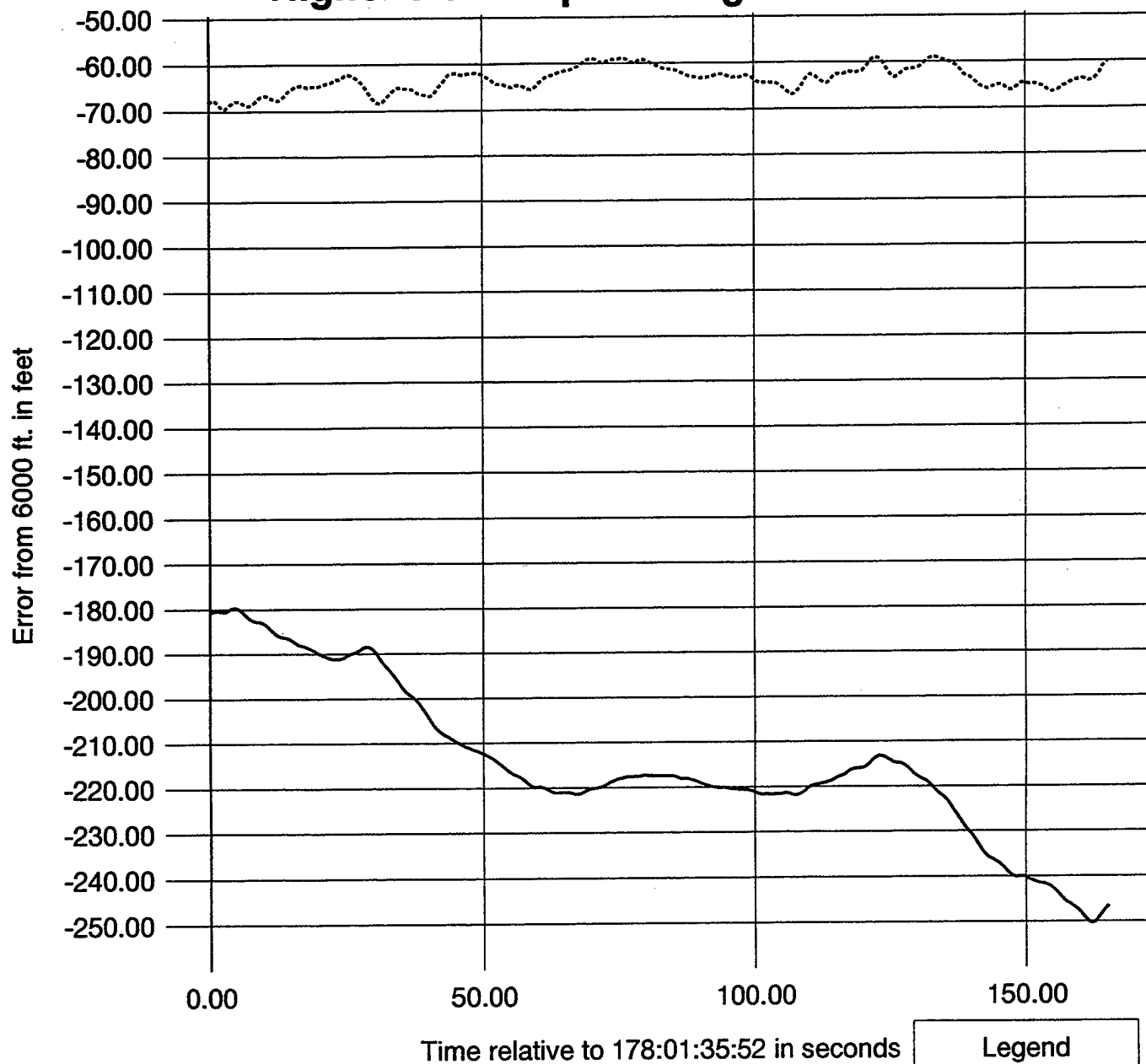


INS CROSS TRACK ERROR

MEAN- -.0176471    STANDARD DEVIATION- .038122  
DATE: June 26, 1995    PASS 22



# **Portage, ME - June 26, 1995 - Pass 22 - Xtk. and Alt. Errors** **Higher alt. and port are greater than zero**



	Mean	St. Dev.
ALT.	-63.57	2.51
XTK.	-214.52	17.61

Legend	
—	P5-xt
.....	P5-alt

27 Jun 1995  
Tape: E1423

Post-line Data Sheet  
Line 41  
Mission: PORTAGE MAINE, DAY

Time: 178:01:46:53  
Pass 23  
Req.# 22

#### AIRCRAFT & CHANNEL DATA

Altitude			CH 1	CH 2	CH 3	CH 4
Desired:	6000 ft	Wave/Pol.:	p-VV	p-VH	p-HV	p-HH
Baro:	5845 ft s.d.=	3 Swath Ctr Ang:	15.0°	15.0°	15.0°	15.0°
Slt. rng:	20632 ft	Tgt Dep Ang:	15.0°	15.0°	15.0°	15.0°
Look:	Right	St rng (ft):	19097	19097	19097	19097
Depr Ang:	25.0°	Near Rng Dep:	17.8°	17.8°	17.8°	17.8°
Des. trk:	156.0°	Far Rng Dep:	9.6°	9.6°	9.6°	9.6°
Start Sq:	90.0°	Atten (dB):	47.0	47.0	46.0	61.0
End Sq:	90.0°	RMS Video (%FS)	25.6	23.4	18.9	28.9

#### WAYPOINTS

Line_up:	N 47:01.57	W 68:36.32	Main Target:	GP
Start:	N 46:50.62	W 68:29.18	Mocomp Point:	
End:	N 46:41.49	W 68:23.26	Lat:	N 46:44.73
			Long:	W 68:30.56
From:	N 61:18.71	W 82:25.28	Tgt Trk:	0.0
To:	N 31:12.69	W 60:36.89	Tgt Vel:	0.0
			Alt:	660.0 ft

#### RADAR PARAMETERS - for UWB

RTP Channel:	1	Filter damping is Hi	->	10 sec	
Resolution:	N/A	PRF Factor is FAST	(262.5 kts)	-	
Swath width:	Single	Ave Gndspd:	Real	->	252.8 kts
RMS Time Constant:	2^7	Mocomp Off for Chnl	1, 2, 3, 4		
Position Reference:	ON	GPS Vel/Pos Reference			
Atten. Tracking:	OFF	Adj Gnd Scene:	5000.0 ft		
Range Gate Delta:	0.0 ft	Range Tracking is	OFF		
Azimuth Presum Rate:	Presum6	Clutterlock Reference:	OFF		
TX Chirp Filename:	CTL1U2B	RX Chirp Filename:	CRL1N0A		

Ave Ref Vel -> .4 fps (s.d.= 1.0)  
Ave Fil Vel -> 1.2 fps (s.d.= .8)

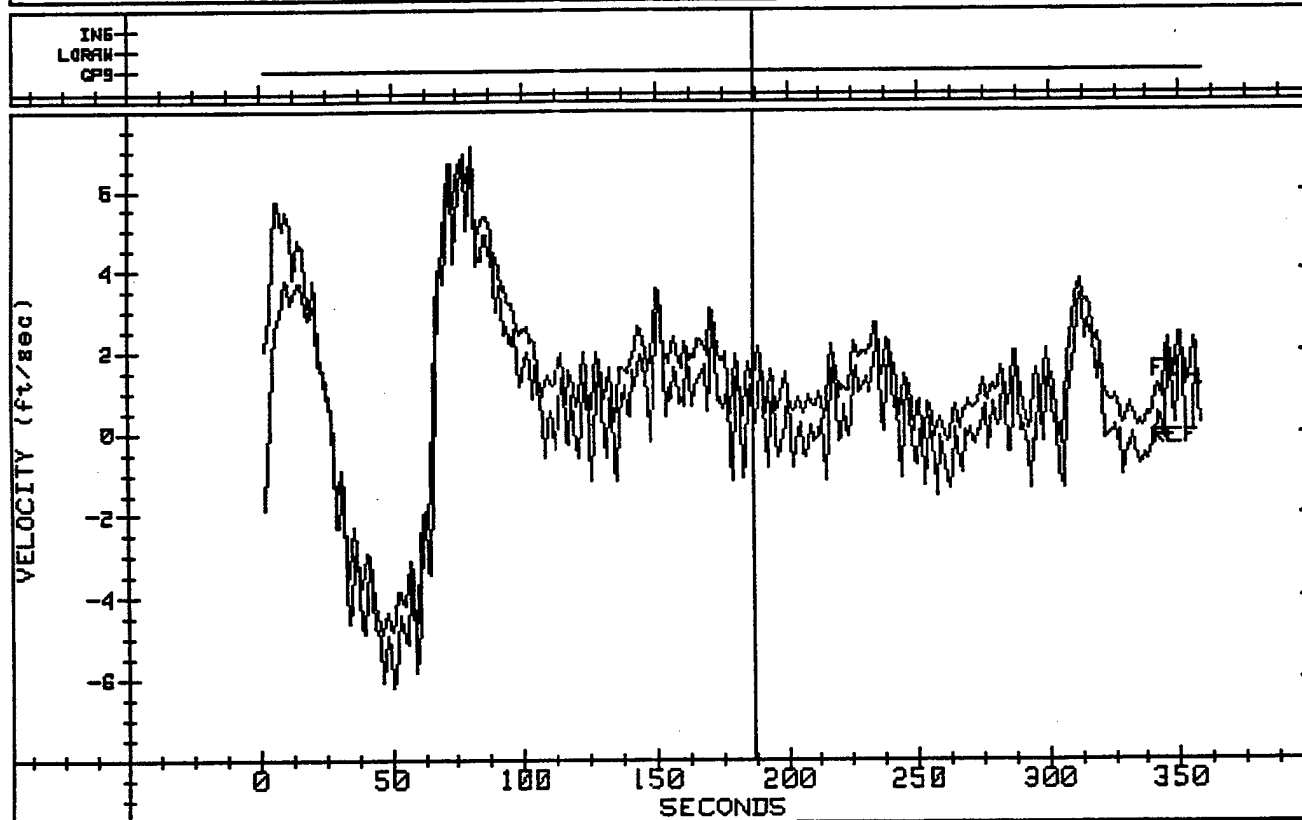
NML XMIT PWR	ANT BIAS	Tape Footage	Drive no.
X: -70.0	Elevation:	0.0°	
L: -70.0	Azimuth:	0.0°	Starting: 6499 ft (1)
C: -70.0	Pitch:	0.0°	Ending: 7709 ft (1)
P: 46.3			

Vel Bias	CAL Atten	LINE Map Time (UCT)
X: 1035.0	X: 63.8 dB	Start: 01:46:53
Y: -433.0	L: 63.8 dB	End: 01:49:31
Z: 6697.0	C: 63.8 dB	

#### Mocomp Counters

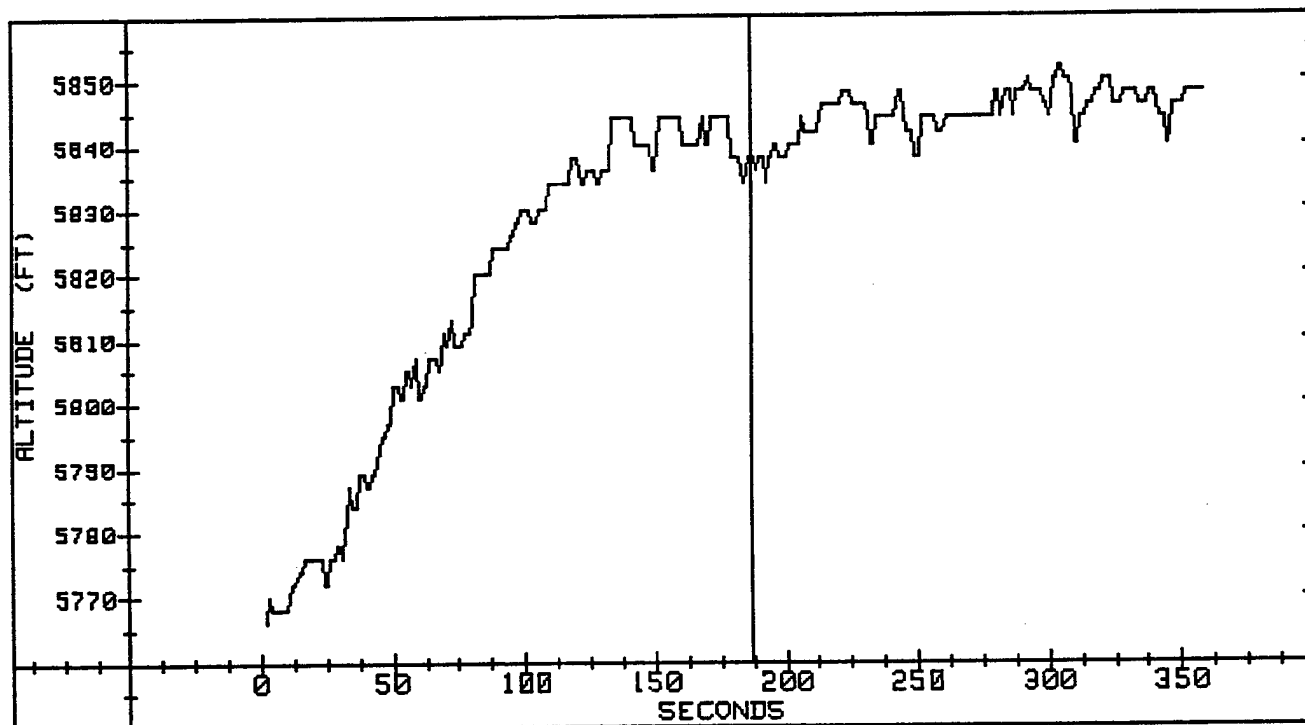
Start:	1316823	001417D7h	CPA (UCT):	00:00:00
End:	1343323	00147F5Bh	Alt:	0 ft (GPS)
			Lat:	N 0:00: 0
			Lon:	E 0:00: 0

FILTERED vs. REF. VELOCITY  
DAY 178 TIME 1:43 PASS 23



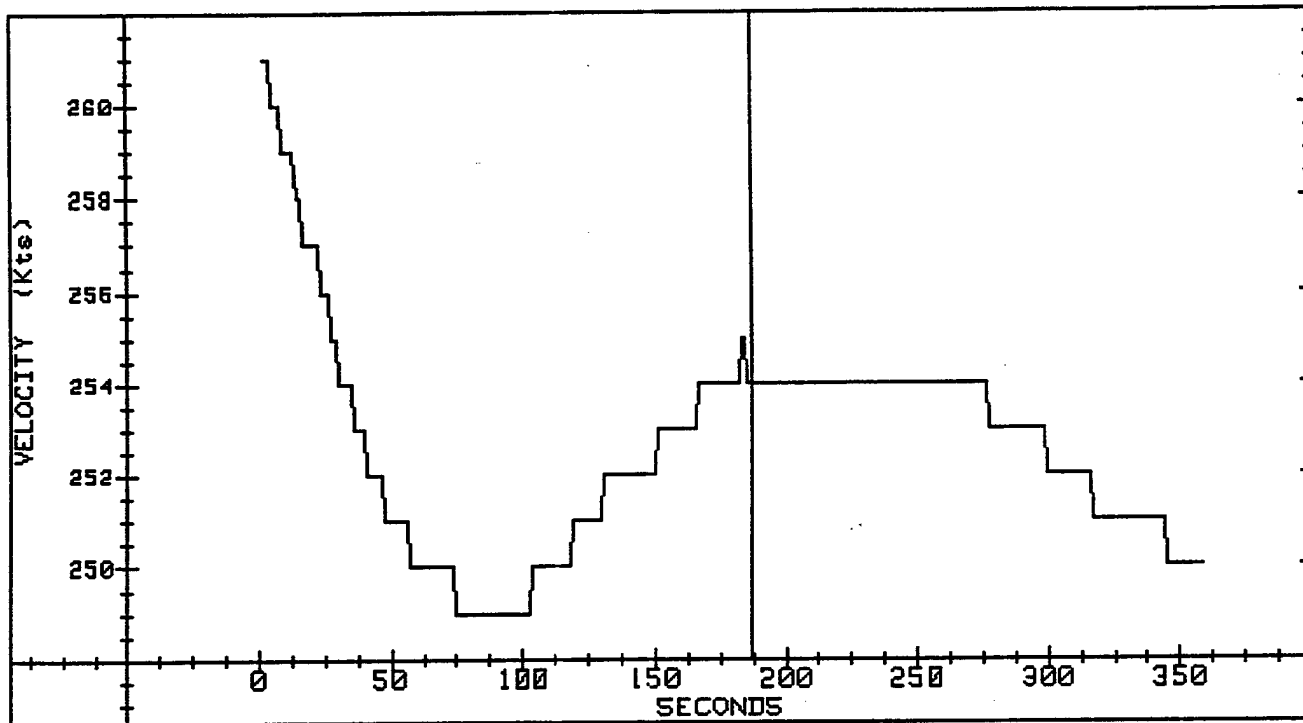
BARO ALTITUDE

DAY 170 TIME 1:43 PASS 23 m= 5045, sd= 2.07107



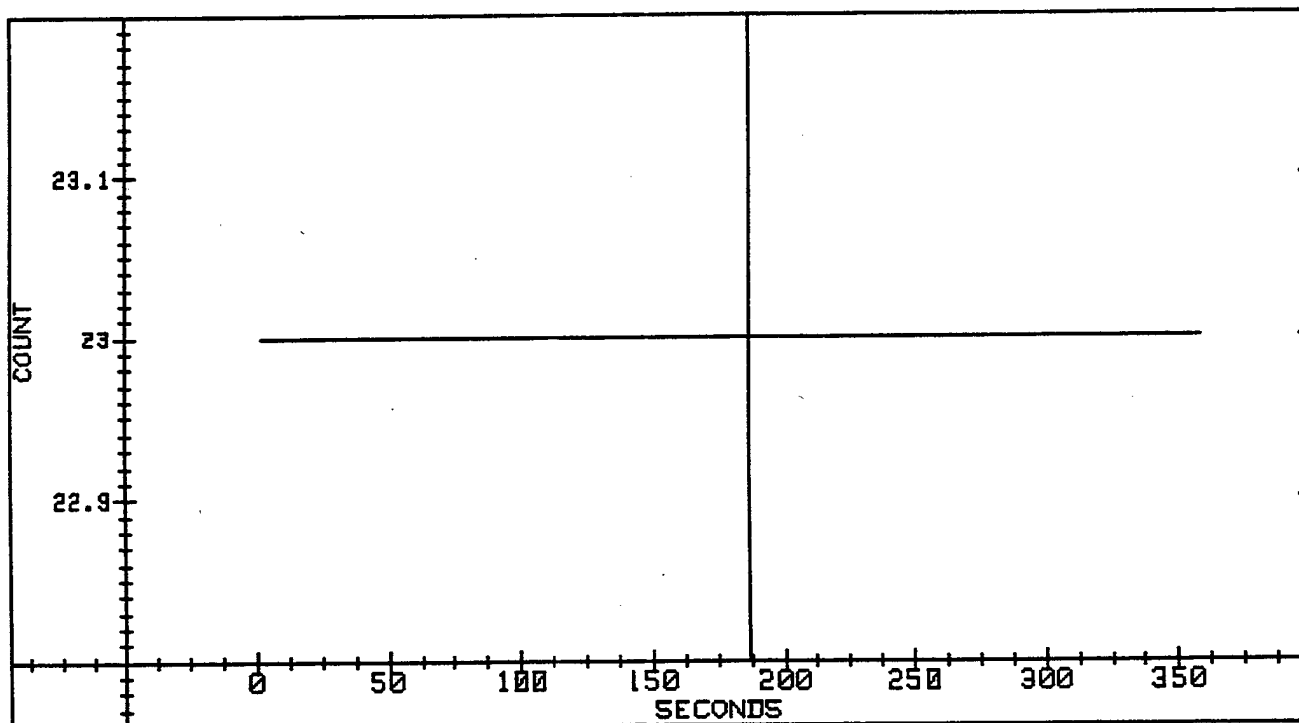
# INS GROUND SPEED

DRY 178 TIME 1:43 PASS 23 m= 252.8, sd= 1.42625



# PASS NUMBER

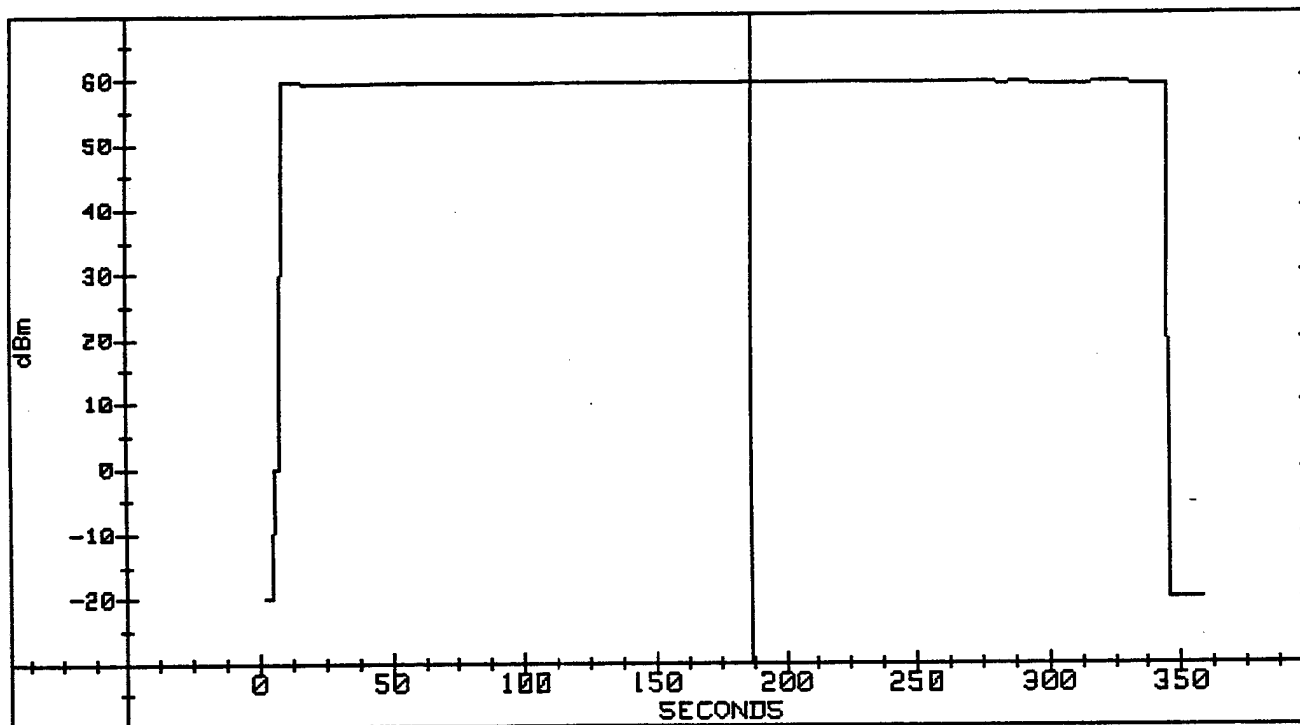
DAY 178 TIME 1:43 PASS 23 m- 23, sd- 0





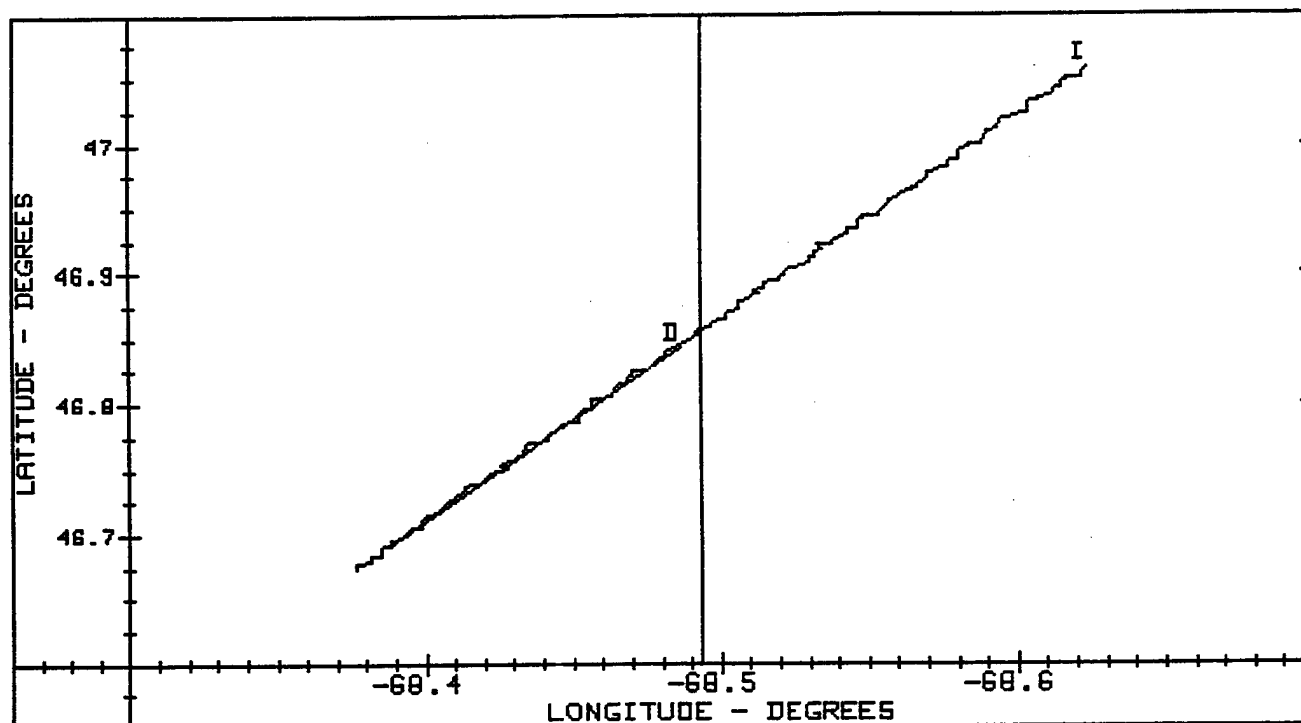
P Band Power

DRY 178 TIME 1:43 PASS 23 m= 52.61, sd= 21.6652



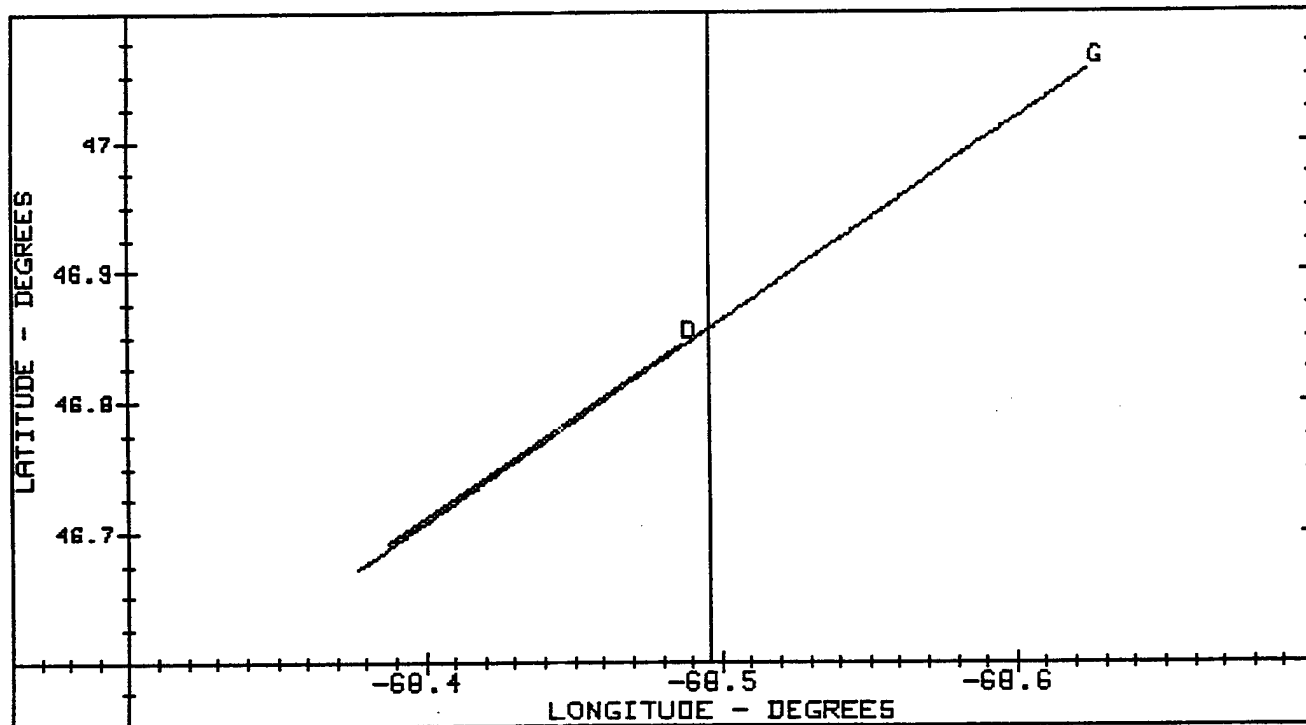
INS AIRCRAFT POSITION

DAY 178 TIME 1:43 PASS 23



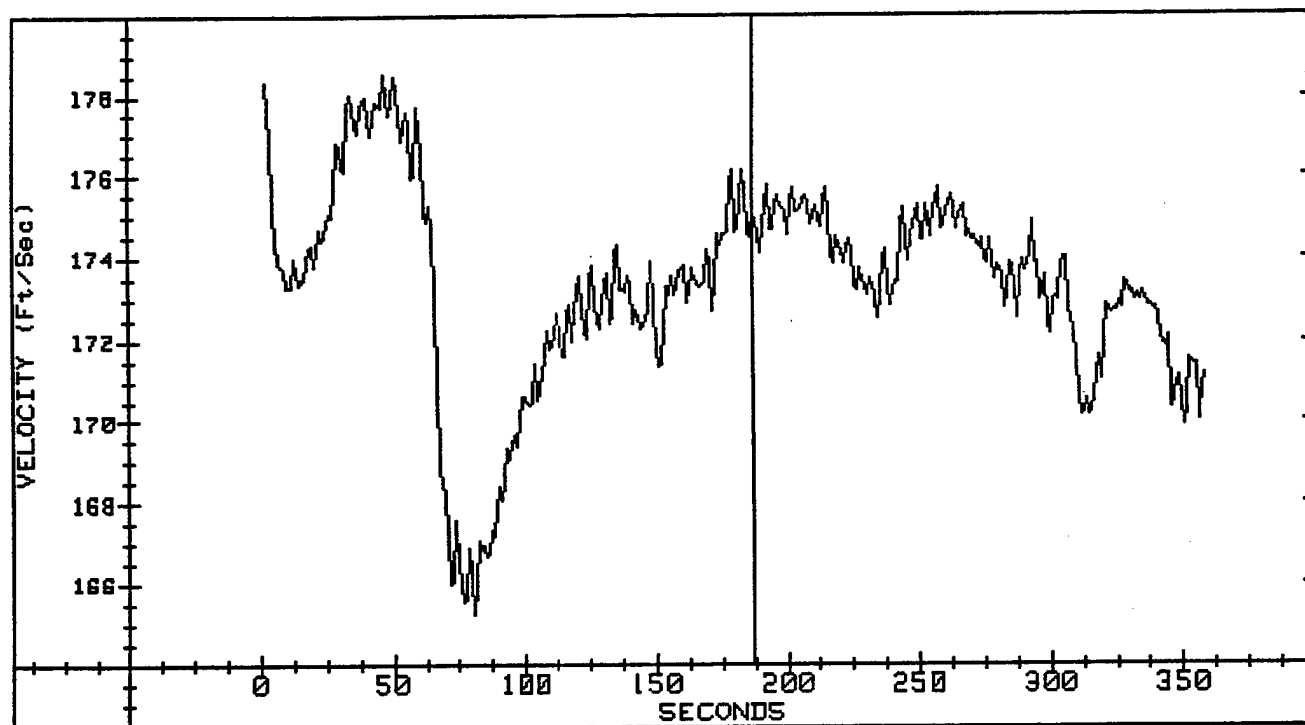
GPS AIRCRAFT POSITION

DAY 178 TIME 1:43 PASS 23



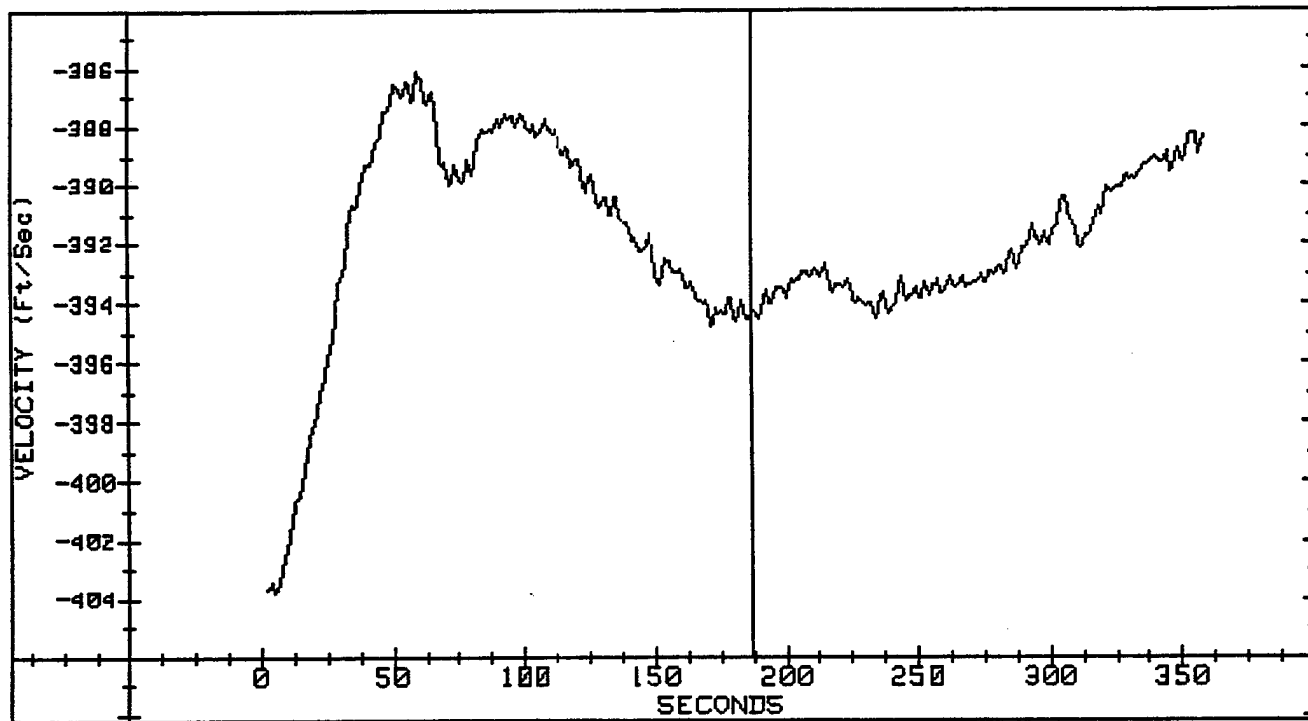
GPS V<sub>e</sub>

DAY 178 TIME 1:43 PASS 23 m= 173.4, sd= 1.4614



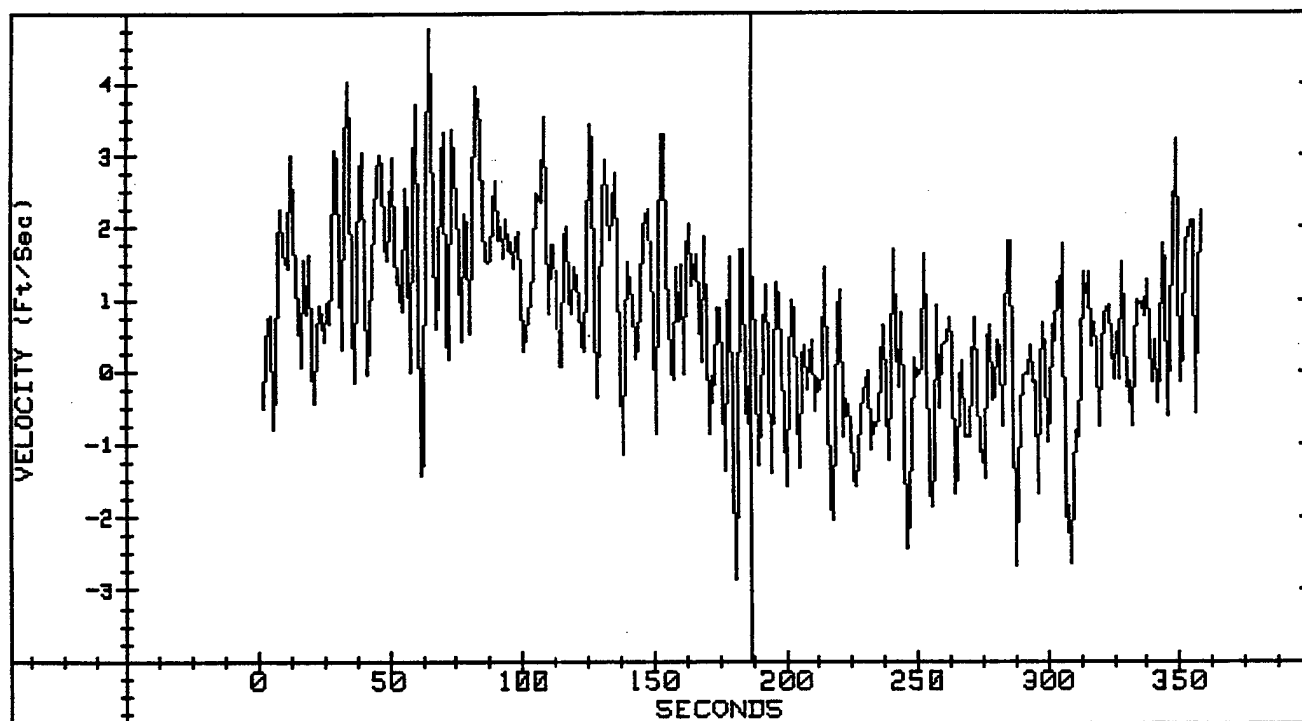
GPS Vn

DAY 178 TIME 1:43 PASS 23 m= -392, sd= 1.74411



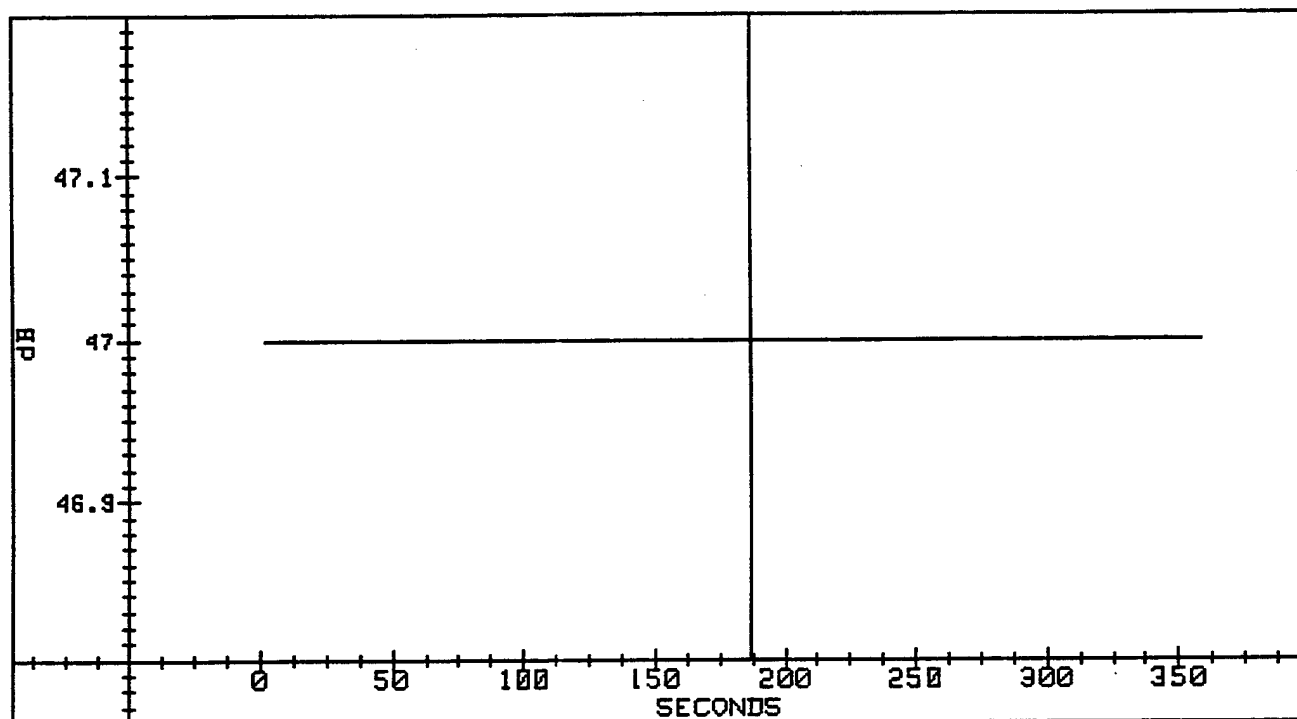
GPS Vv

DAY 178 TIME 1:43 PASS 23  $m = -.01474$ ,  $sd = 1.04659$



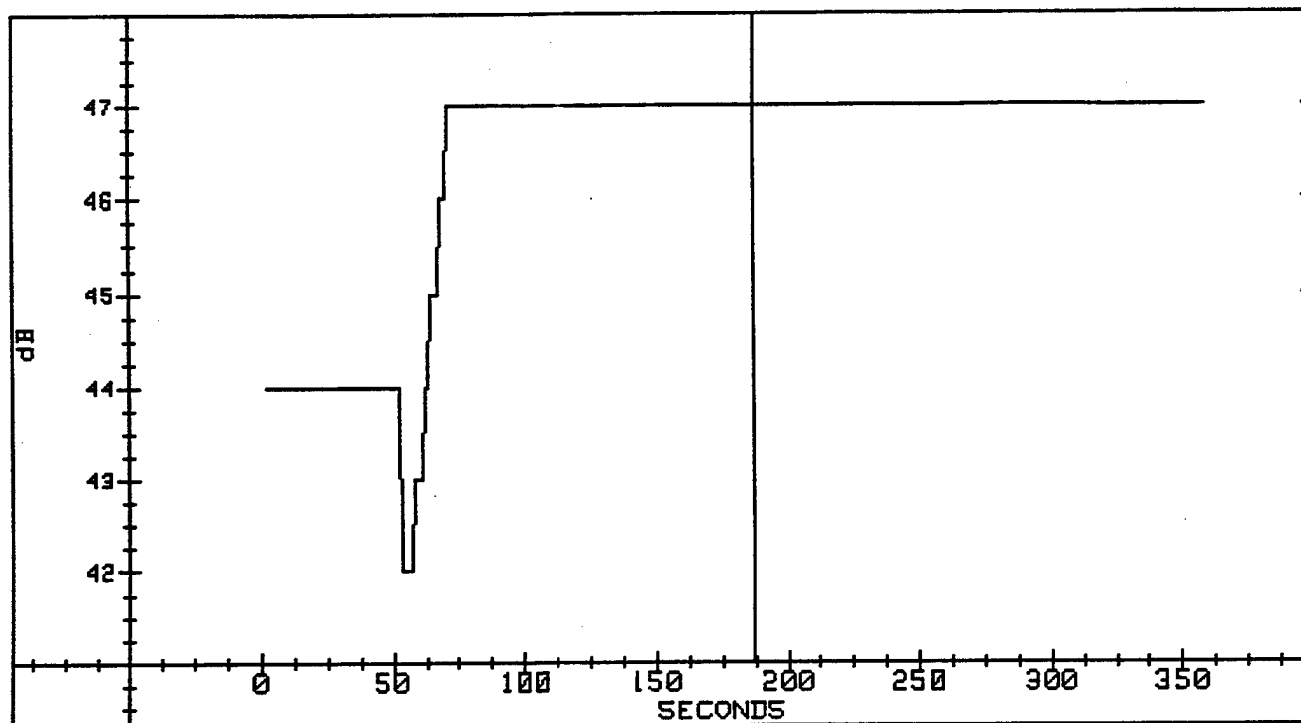
Ch1 RES Attenuation

DAY 178 TIME 1:43 PASS 23 m= 47, sd= 0



Ch2 RES Attenuation

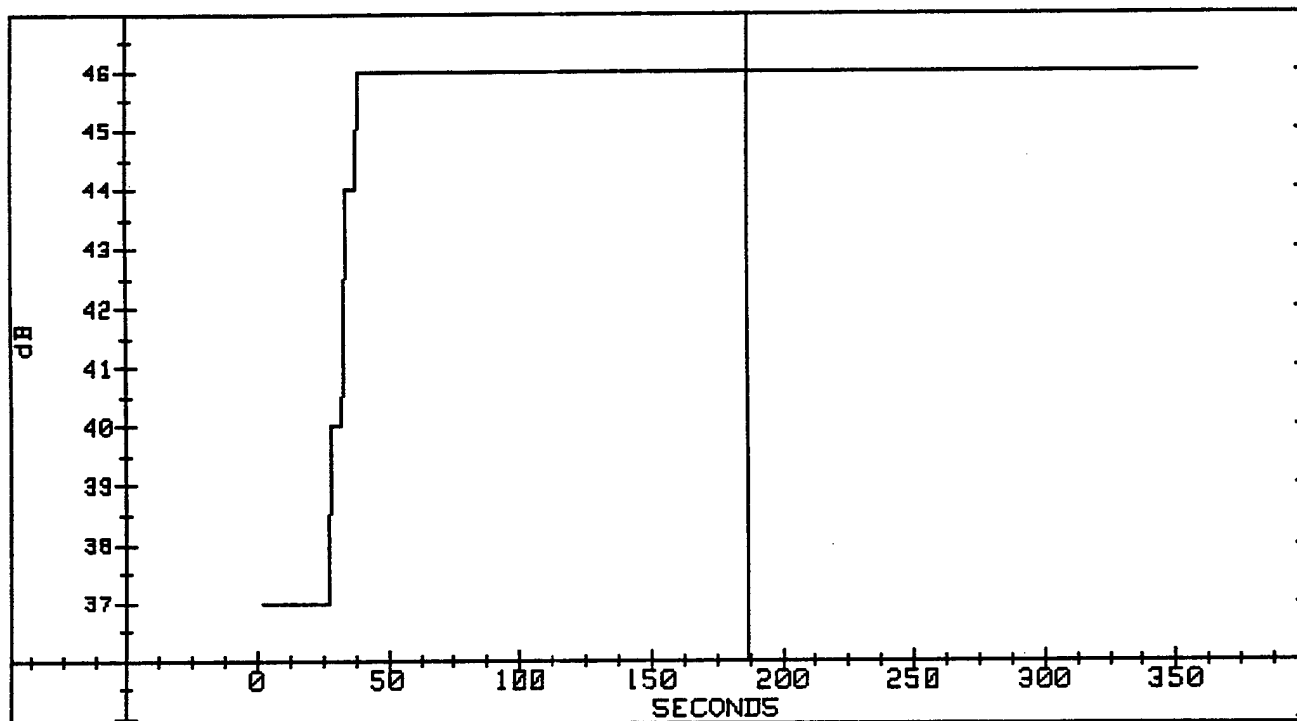
DAY 178 TIME 1:43 PASS 23 m= 47. sd= 0





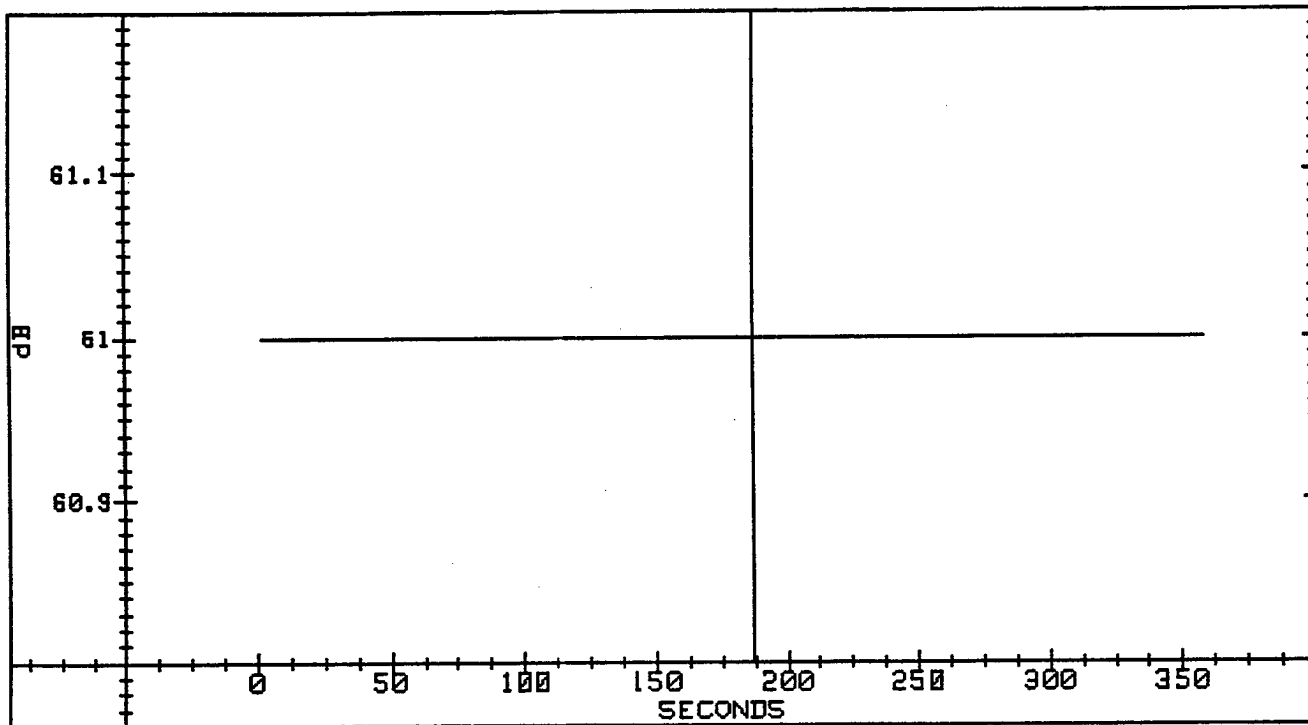
Ch3 RES Attenuation

DAY 170 TIME 1:43 PASS 23 m= 46, sd= 0



Ch4 RES Attenuation

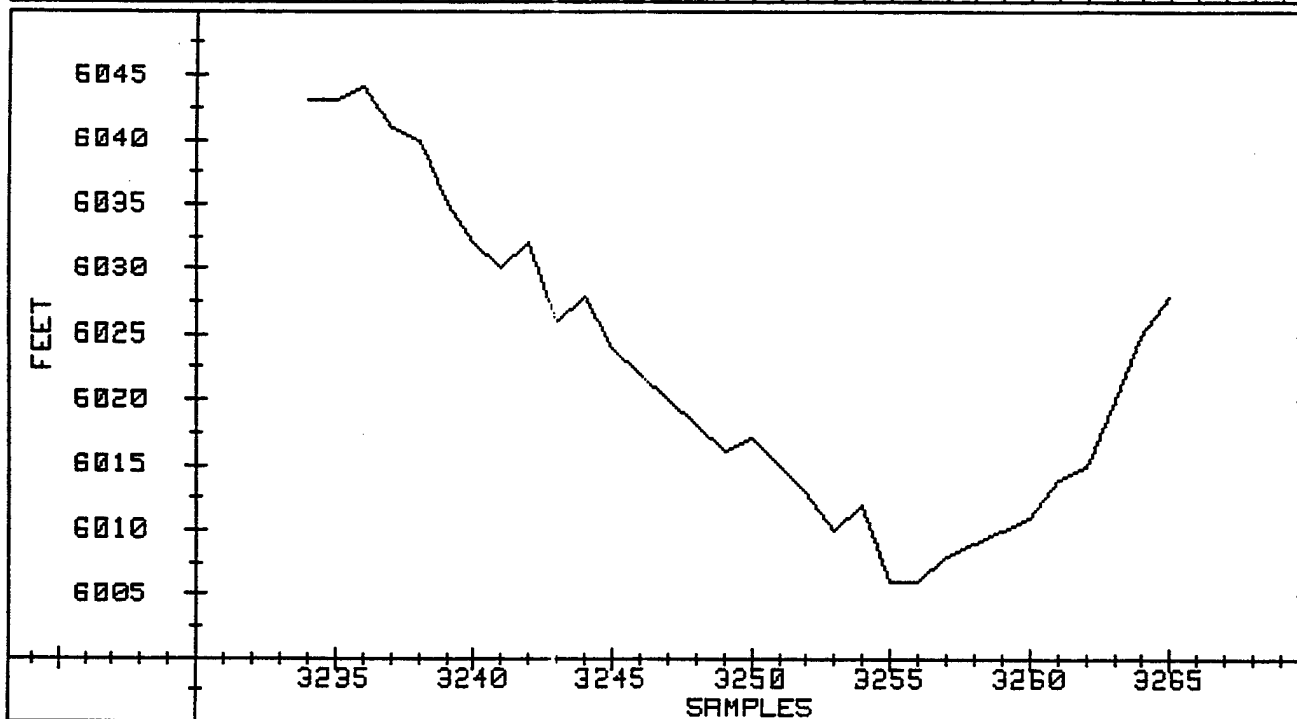
DAY 170 TIME 1:43 PASS 23 m= 61. sd= 0



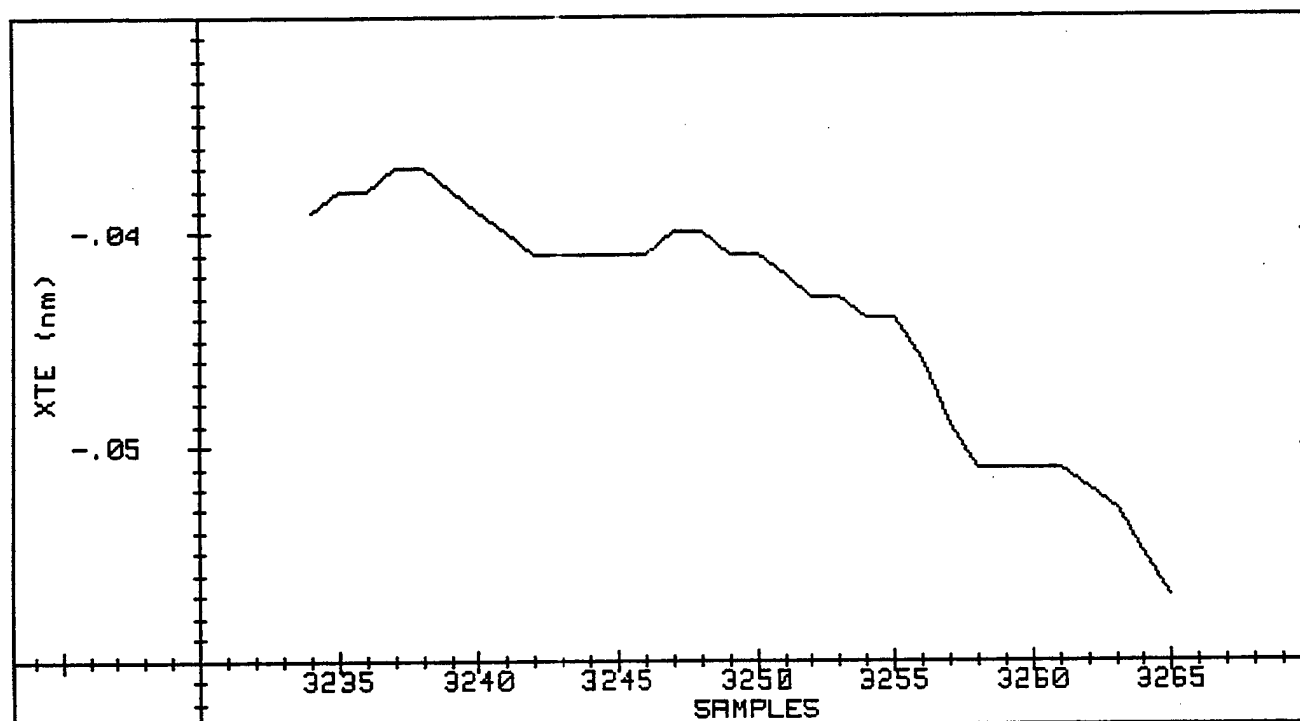
## GPS ALTITUDE

MEAN= 6022.28 STANDARD DEVIATION= 11.5873

DATE: June 26, 1995 PASS 23

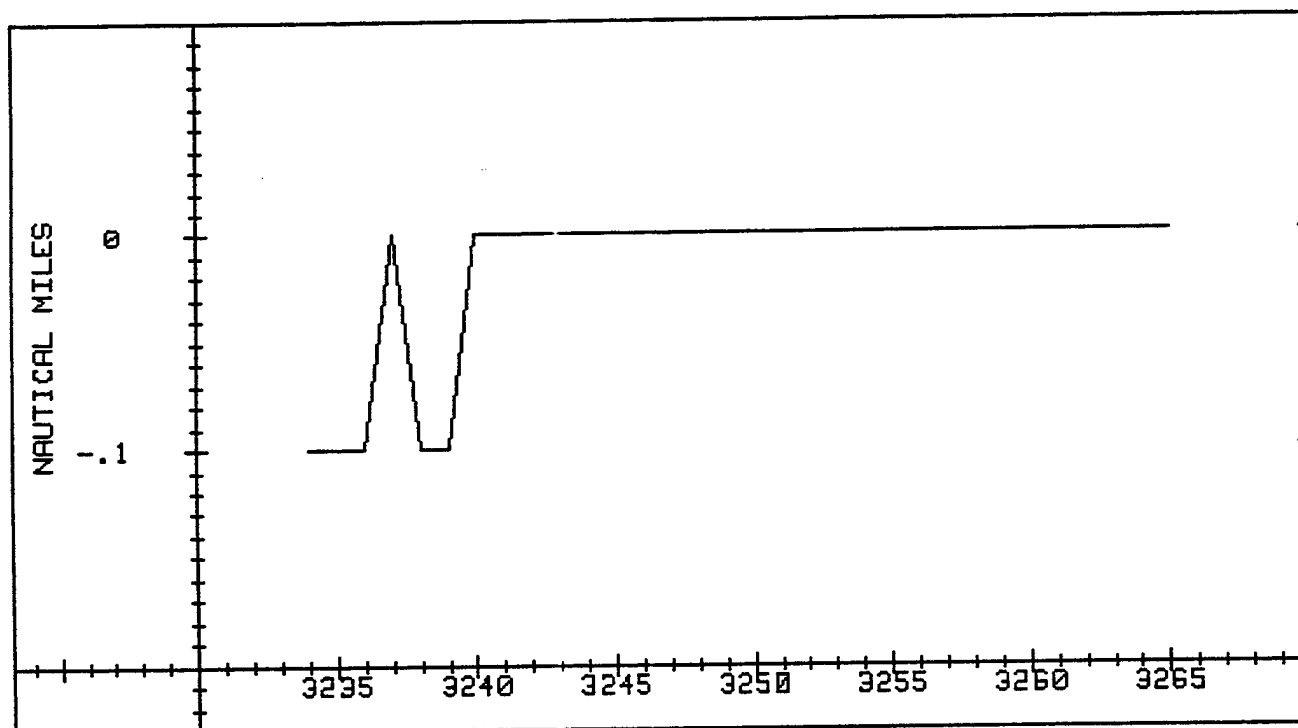
OFF  
ON  
BAR

GPS Cross Track Error  
MEAN= -.0439063 STANDARD DEVIATION= .00568089  
DATE: June 26, 1995 PASS 23

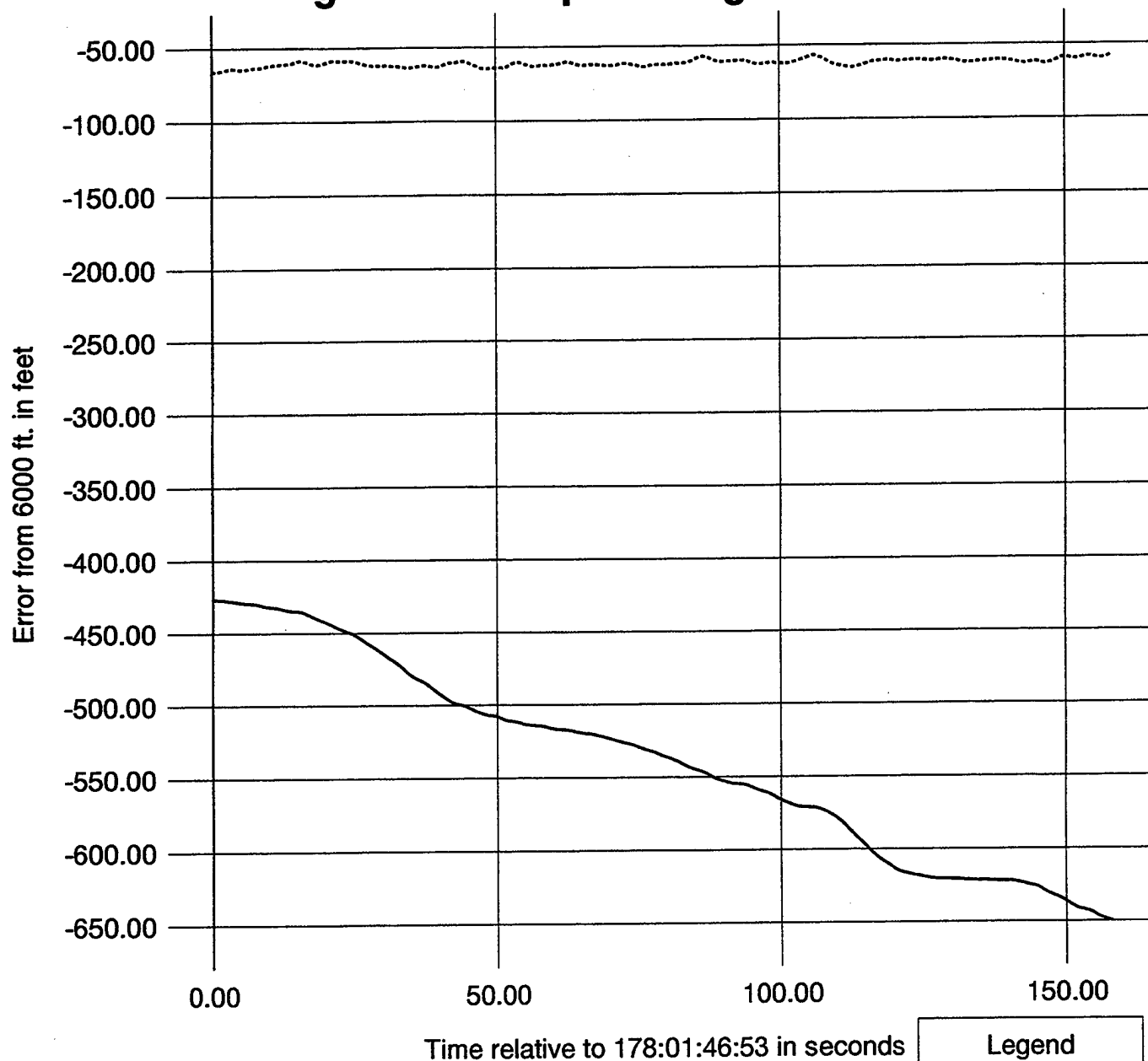


INS CROSS TRACK ERROR

MEAN- -.015625      STANDARD DEVIATION- .0363092  
DATE: June 26, 1995      PASS 23



# **Portage, ME - June 26, 1995 - Pass 23 - Xtk. and Alt. Errors** **Higher alt. and port are greater than zero**



	Mean	St. Dev.
ALT.	-61.48	1.72
XTK.	-538.93	67.46

Legend	
—	P5-xt
.....	P5-alt

27 Jun 1995  
Tape: E1423

Post-line Data Sheet  
Line 43  
Mission: PORTAGE MAINE, DAY

Time: 178:01:58:31  
Pass 24  
Req.# 23

#### AIRCRAFT & CHANNEL DATA

Altitude			CH 1	CH 2	CH 3	CH 4
Desired:	6000 ft	Wave/Pol.:	p-VV	p-VH	p-HV	p-HH
Baro:	5840 ft s.d.=	4 Swath Ctr Ang:	15.0°	15.0°	15.0°	15.0°
Slt. rng:	20632 ft	Tgt Dep Ang:	15.0°	15.0°	15.0°	15.0°
Look:	Right	St rng (ft):	19097	19097	19097	19097
Depr Ang:	25.0°	Near Rng Dep:	17.8°	17.8°	17.8°	17.8°
Des. trk:	306.0°	Far Rng Dep:	9.5°	9.5°	9.5°	9.5°
Start Sq:	90.0°	Atten (dB):	47.0	44.0	42.0	61.0
End Sq:	90.0°	RMS Video (%FS)	26.0	24.3	28.1	25.0

#### WAYPOINTS

Line_up:	N 46:32.06	W 68:13.43	Main Target:	GP
Start:	N 46:39.14	W 68:27.49	Mocomp Point:	
End:	N 46:45.01	W 68:39.25	Lat:	N 46:44.73
			Long:	W 68:30.56
From:	N 35:33.93	W 52:01.04	Tgt Trk:	0.0 Tgt Vel: 0.0
To:	N 54:22.37	W 91:55.52	Alt:	660.0 ft

#### RADAR PARAMETERS - for UWB

RTP Channel:	1	Filter damping is Hi	-> 10 sec
Resolution:	N/A	PRF Factor is FAST	(262.5 kts)
Swath width:	Single	Ave Gndspd: Real	-> 244.8 kts
RMS Time Constant:	2^7	Mocomp Off for Chnl	1, 2, 3, 4
Position Reference:	ON	GPS Vel/Pos Reference	
Atten. Tracking:	OFF	Adj Gnd Scene:	5000.0 ft
Range Gate Delta:	0.0 ft	Range Tracking is	OFF
Azimuth Presum Rate:	Presum6	Clutterlock Reference:	OFF
TX Chirp Filename:	CTL1U2B	RX Chirp Filename:	CRL1N0A
Ave Ref Vel ->	-1.2 fps (s.d.= 1.4)		
Ave Fil Vel ->	-2.7 fps (s.d.= 1.3)		

NML XMIT PWR	ANT BIAS	Tape Footage	Drive no.
X: -70.0	Elevation:	0.0°	
L: -70.0	Azimuth:	0.0°	Starting: 7725 ft (1)
C: -70.0	Pitch:	0.0°	Ending: 8993 ft (1)
P: 46.1			

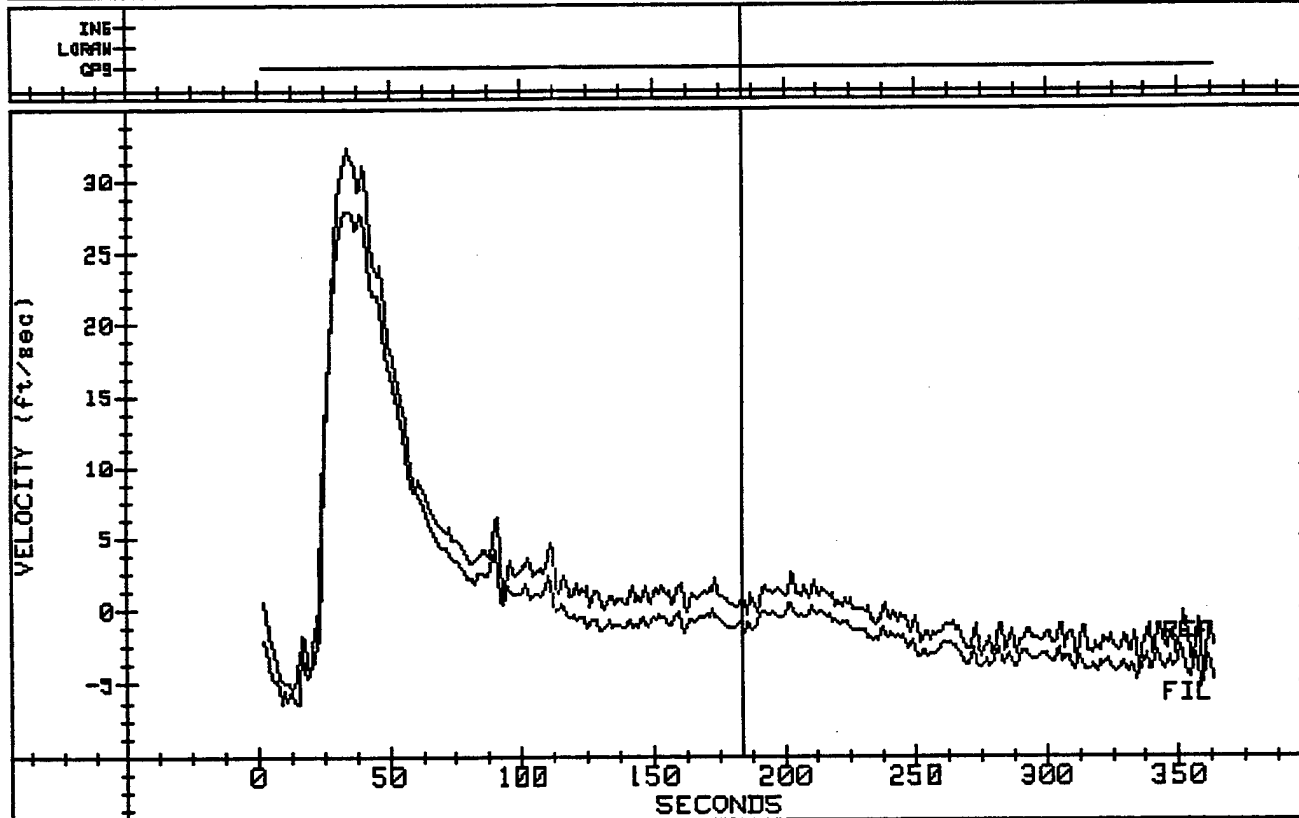
Vel Bias	CAL Atten	LINE Map Time (UCT)
X: 1035.0	X: 63.8 dB	Start: 01:58:31
Y: -433.0	L: 63.8 dB	End: 02:01:16
Z: 6697.0	C: 63.8 dB	

#### Mocomp Counters

Start: 1376501 001500F5h  
End: 1404168 00156D08h

CPA (UCT): 00:00:00  
Alt: 0 ft (GPS)  
Lat: N 0:00: 0  
Lon: E 0:00: 0

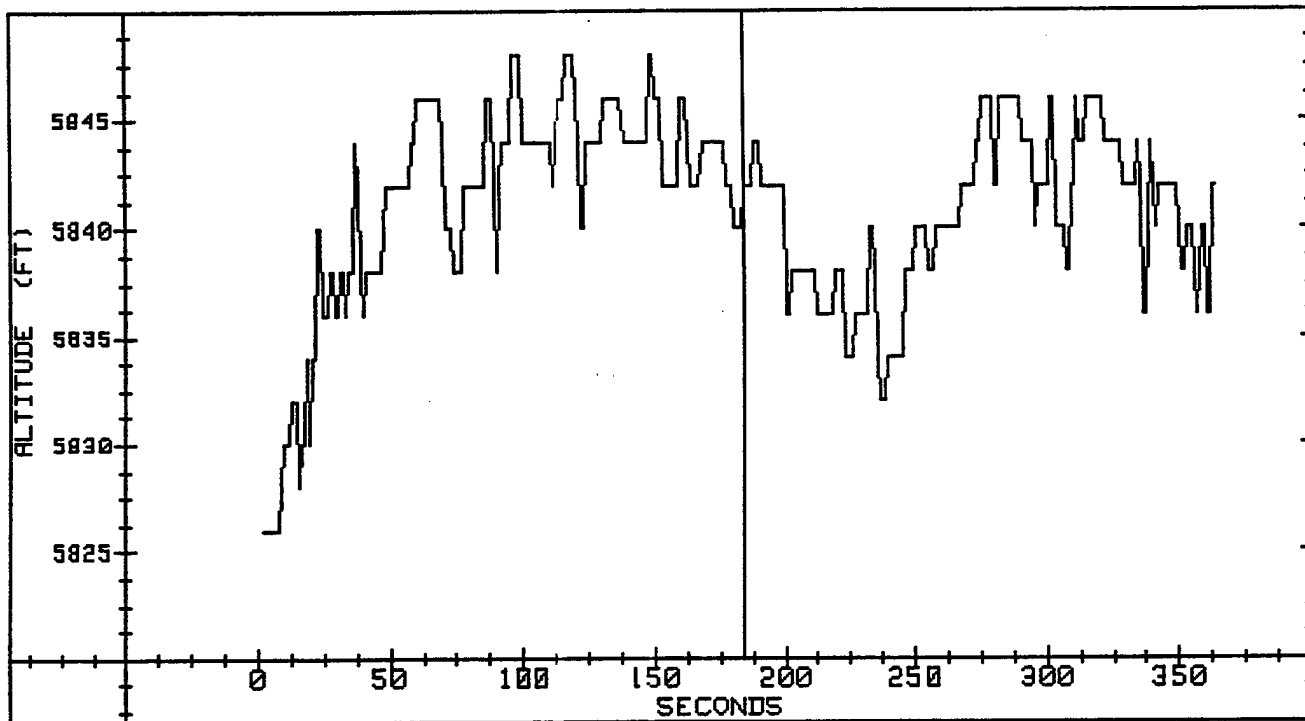
FILTERED vs. REF. VELOCITY  
DAY 178 TIME 1:55 PASS 24





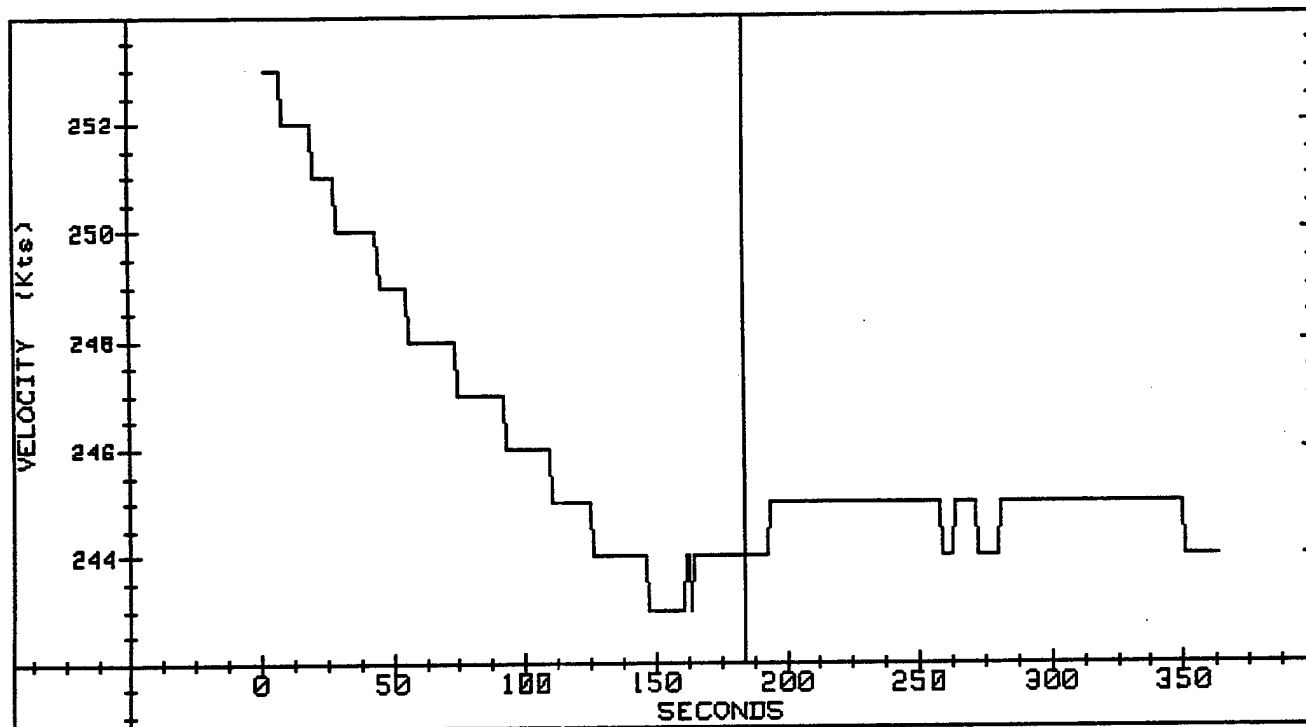
BARO ALTITUDE

DAY 178 TIME 1:55 PASS 24  $m = 5840$ ,  $sd = 3.72102$



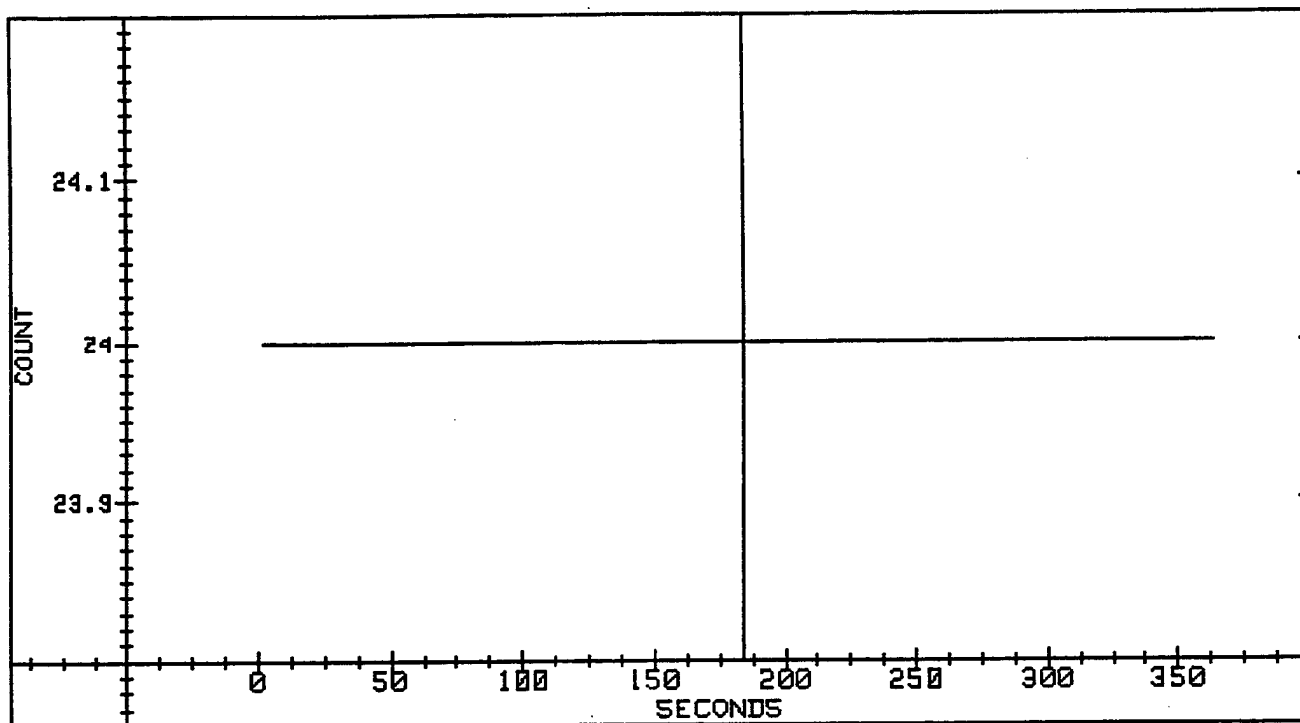
# INS GROUND SPEED

DAY 178 TIME 1:55 PASS 24 m= 244.8, sd= .363448



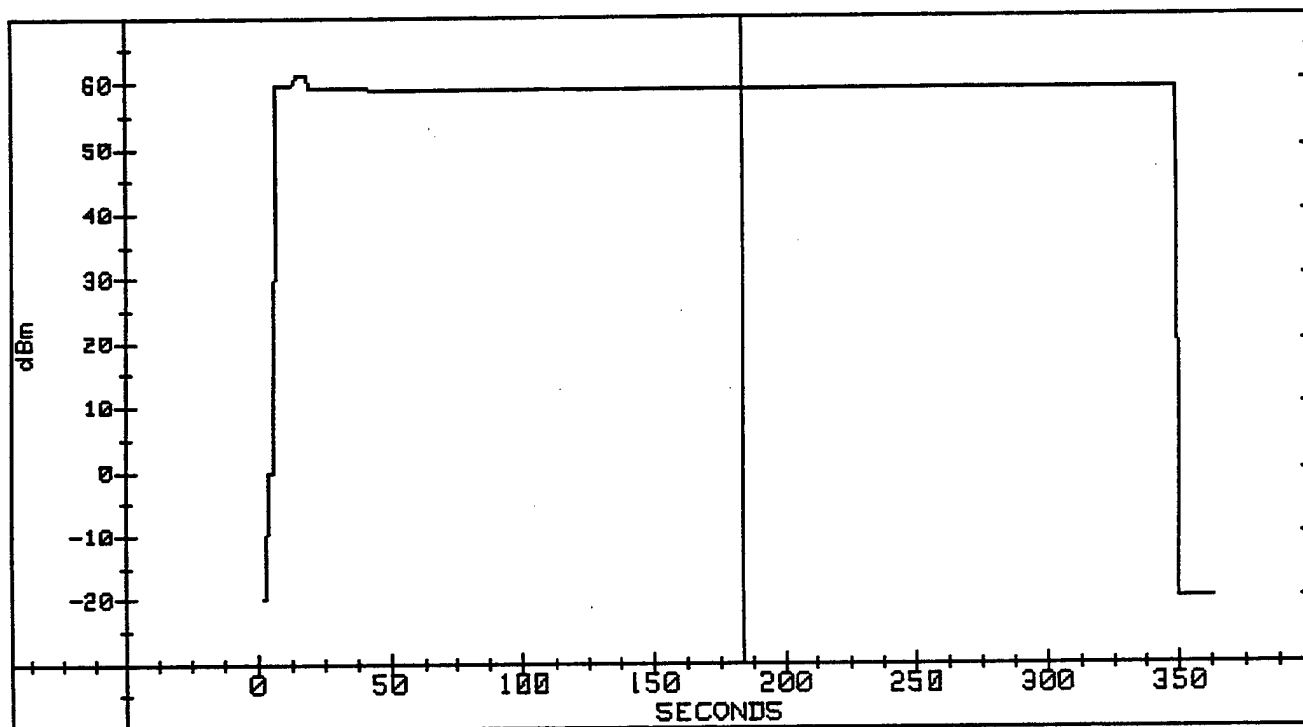
# PASS NUMBER

DAY 170 TIME 1:55 PASS 24 m= 24. sd= 0



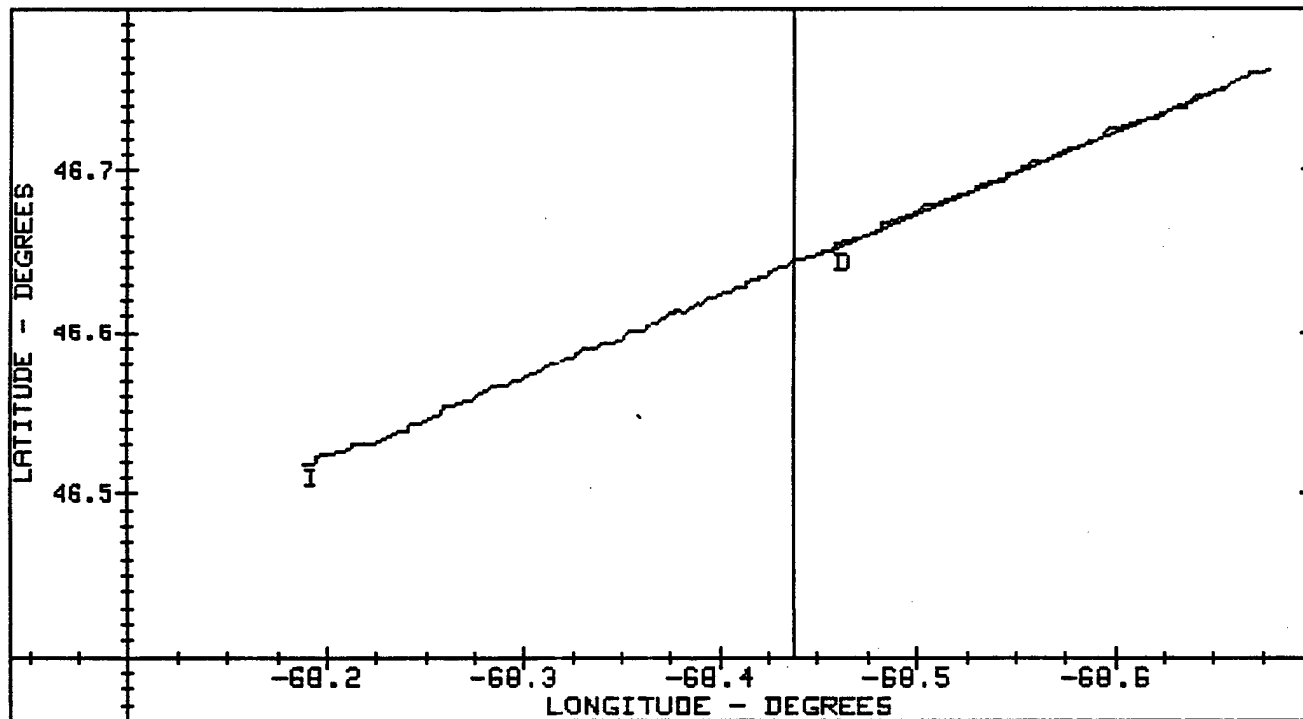
P Band Power

DAY 178 TIME 1:55 PASS 24 m= 52.22, sd= 21.9169



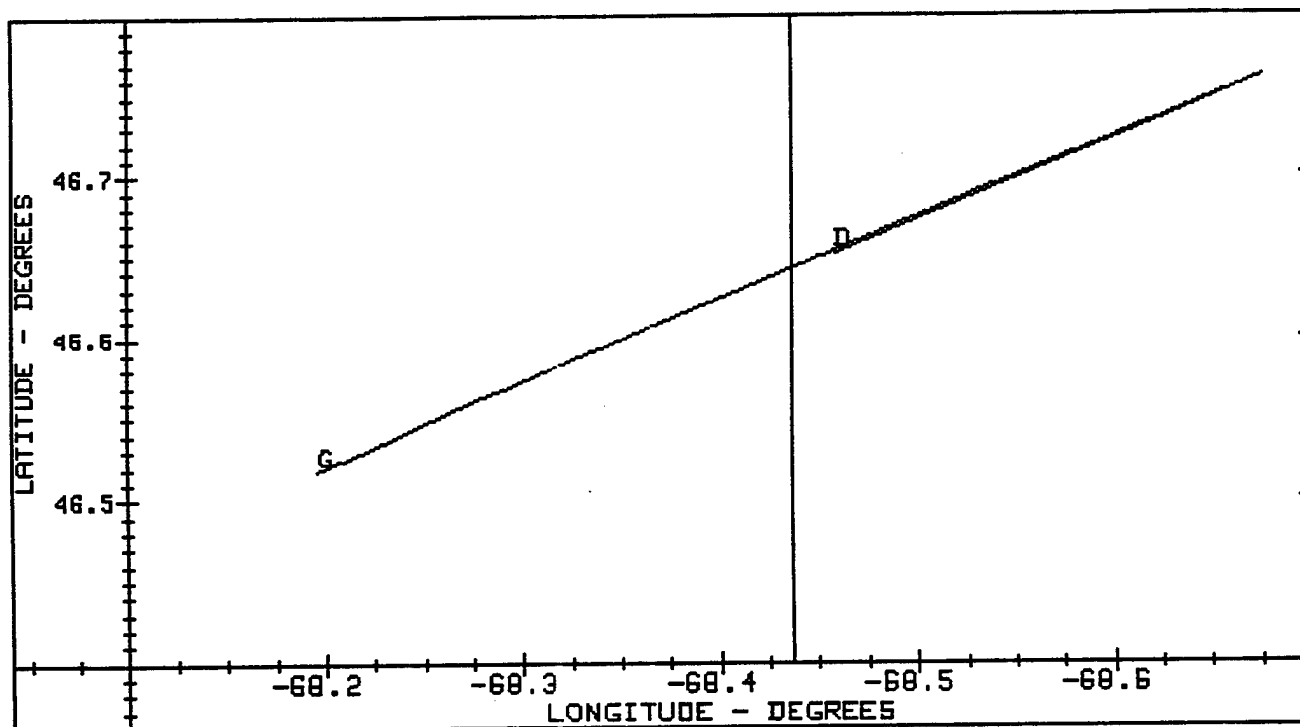
INS AIRCRAFT POSITION

DAY 170 TIME 1:55 PASS 24



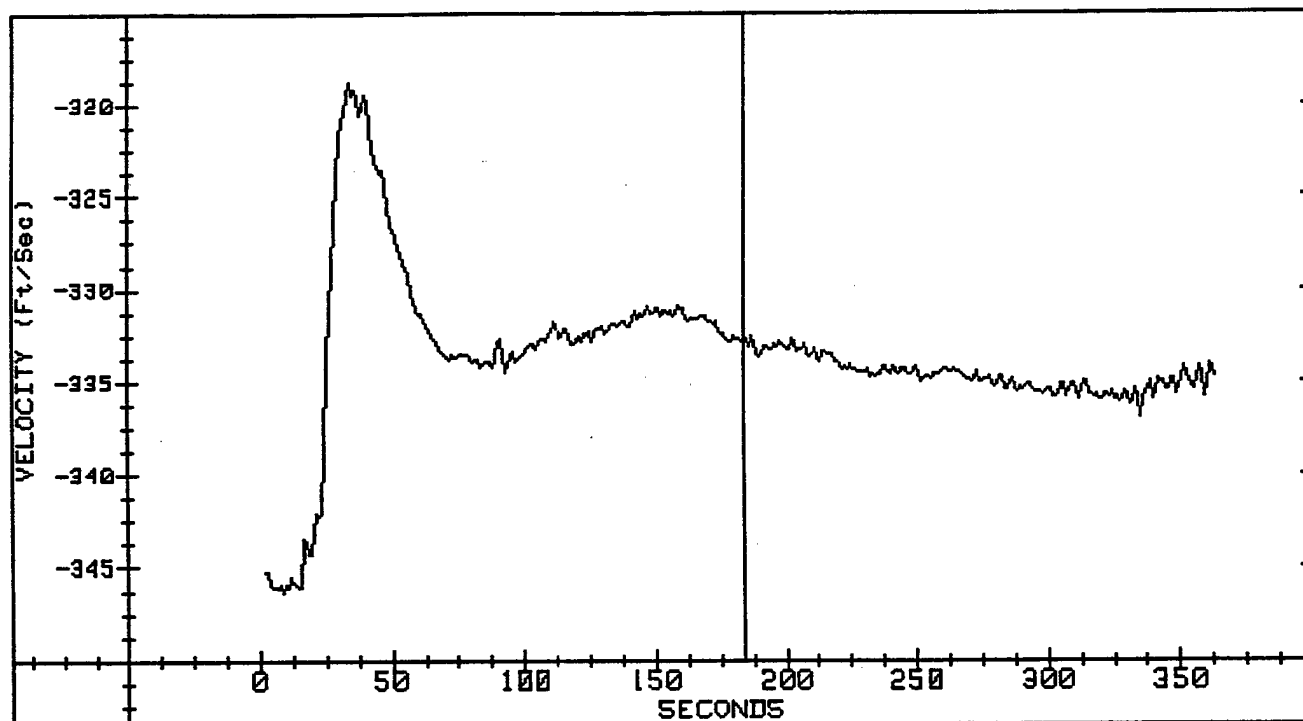
GPS AIRCRAFT POSITION

DAY 178 TIME 1:55 PASS 24



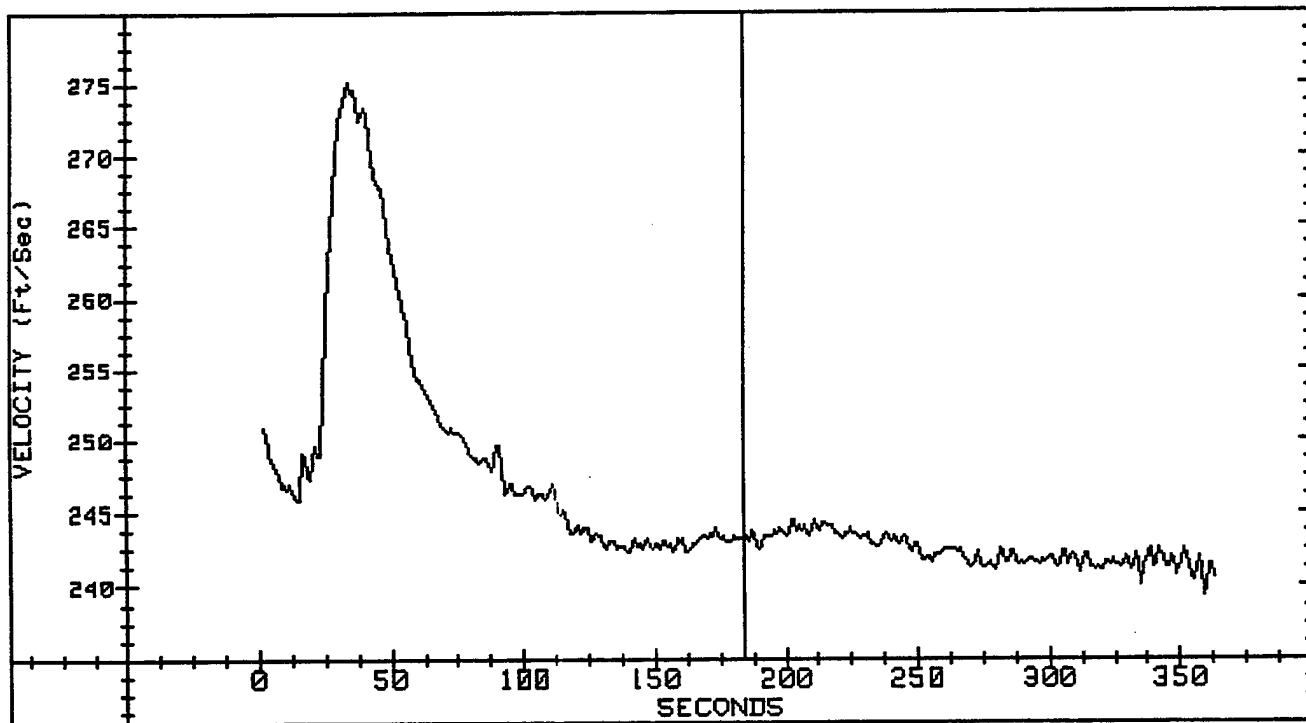
GPS V<sub>e</sub>

DAY 170 TIME 1:55 PASS 24 m= -334.8. sd= .004199



GPS Vn

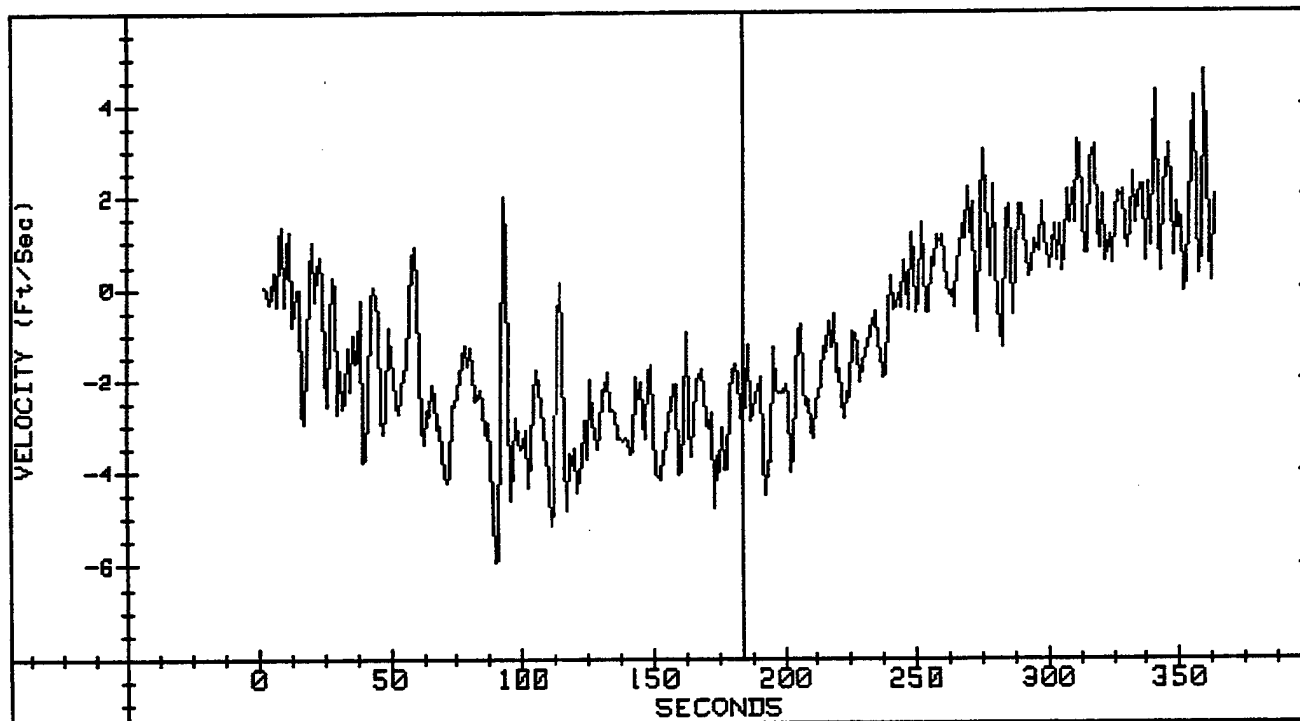
DRY 178 TIME 1:55 PASS 24 m= 242.3, sd= 1.01651





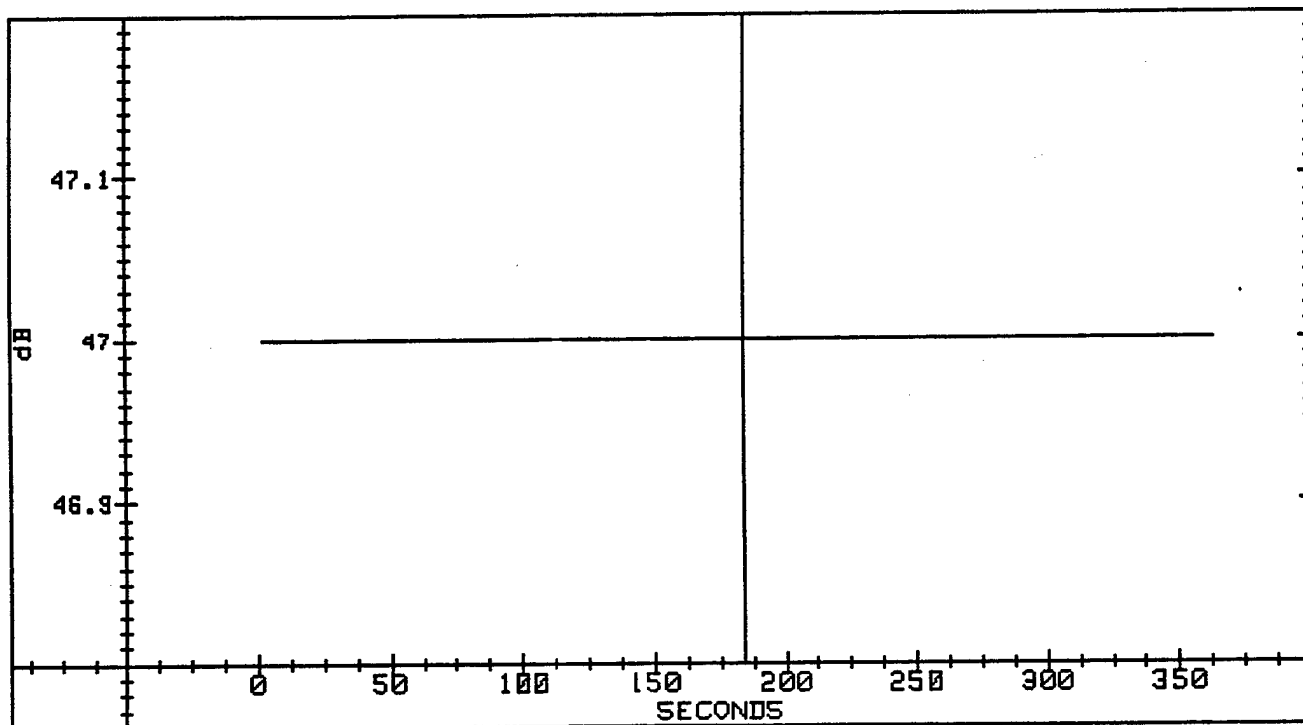
GPS Vv

DRY 178 TIME 1:55 PASS 24 m= .4106, sd= 1.68132



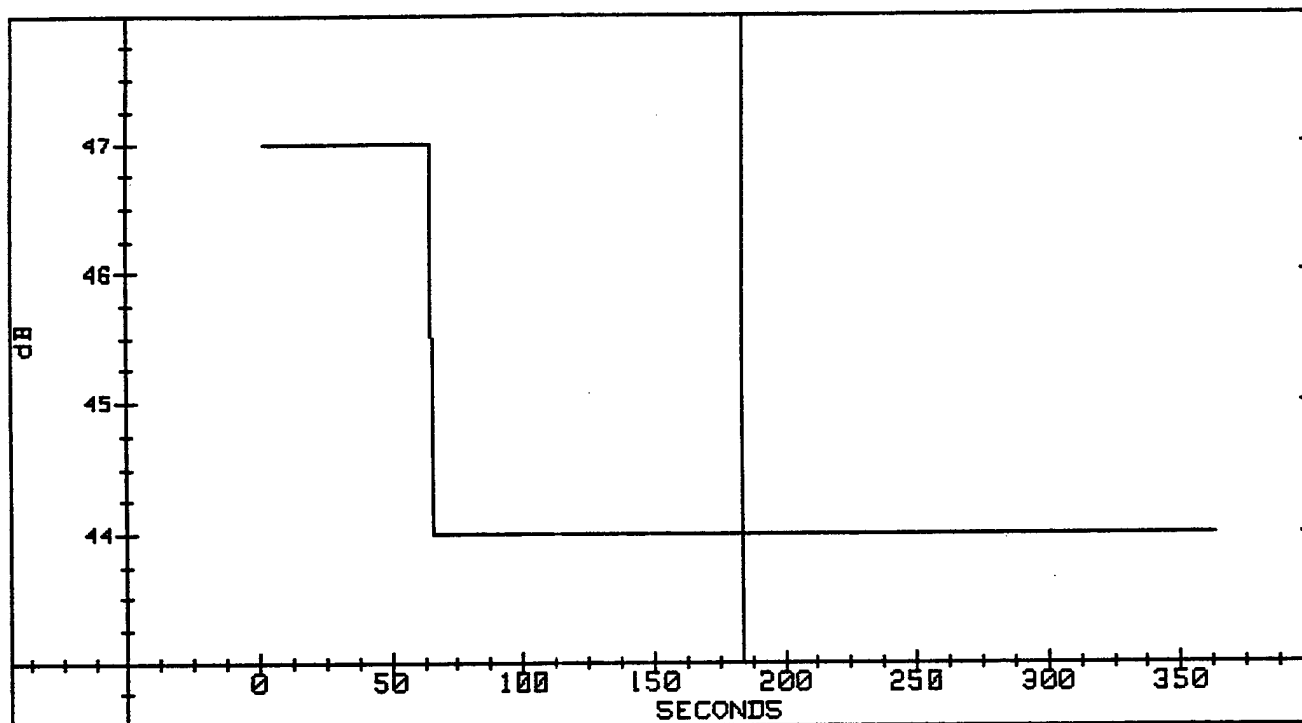
Ch1 RES Attenuation

DAY 178 TIME 1:55 PASS 24 m= 47. sd= 0



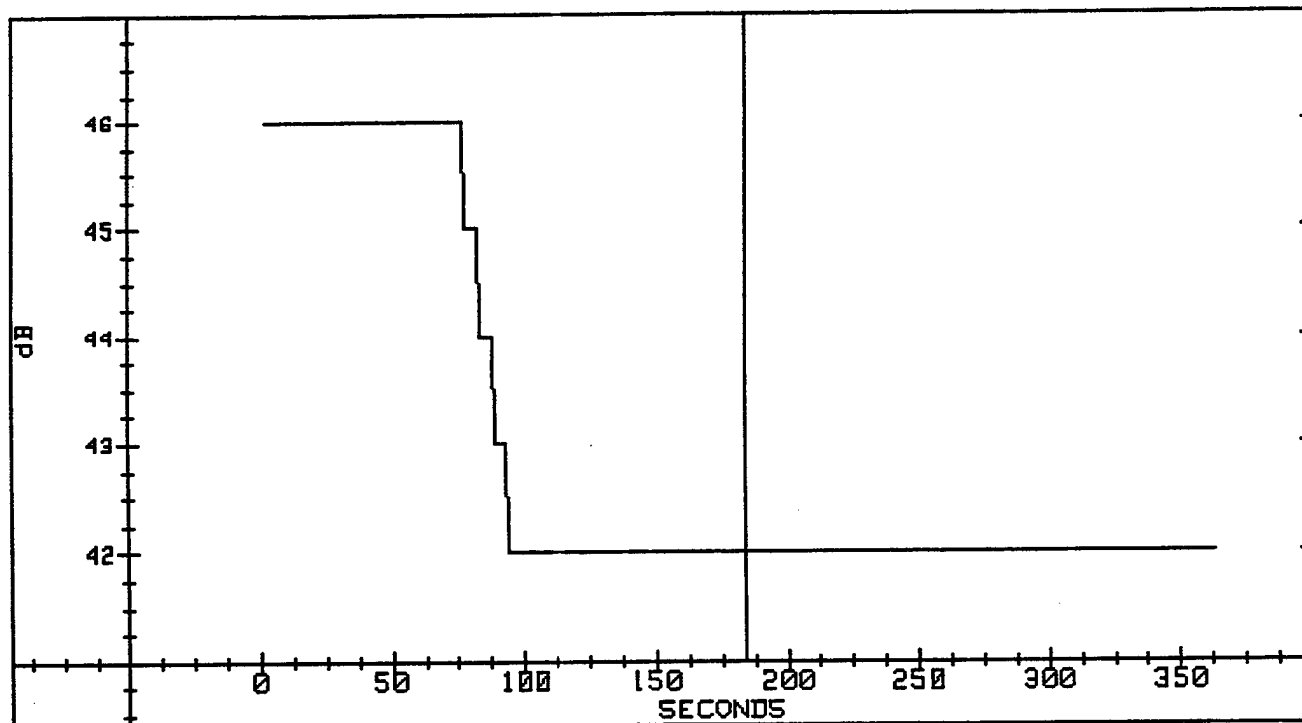
Ch2 RES Attenuation

DAY 170 TIME 1:55 PASS 24 m= 44. sd= 0



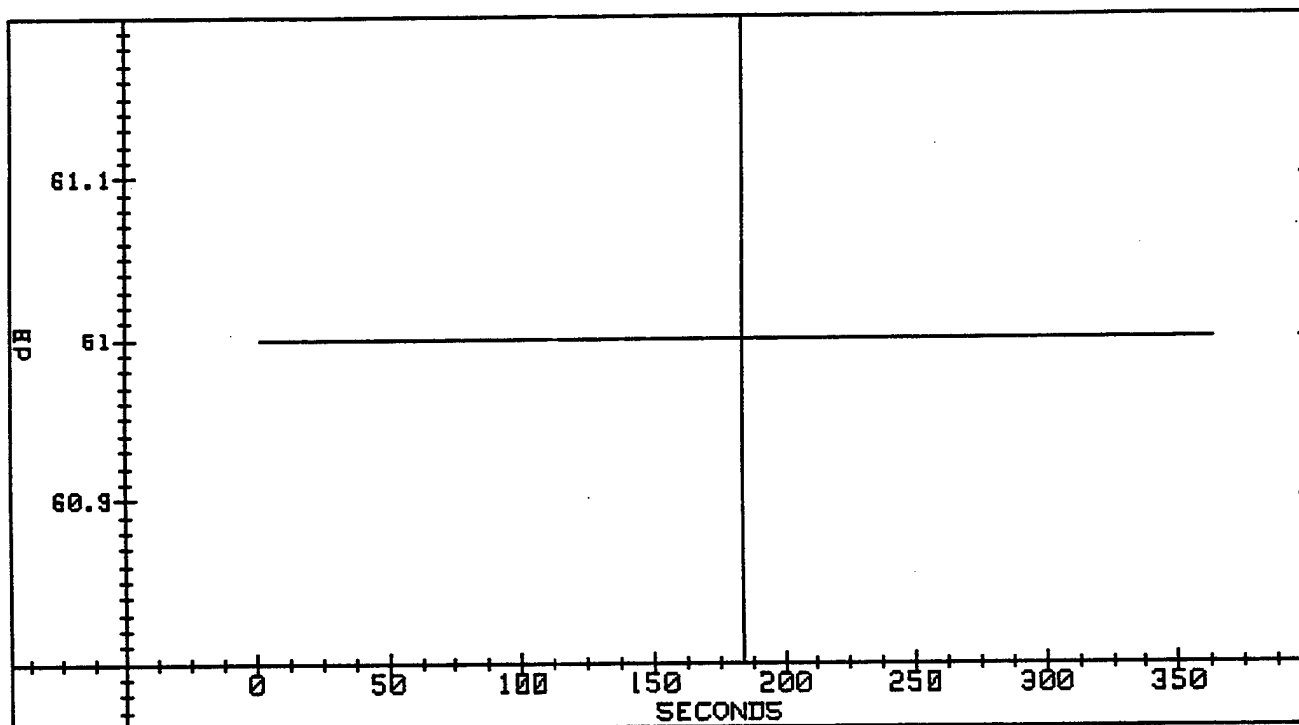
Ch3 RES Attenuation

DAY 178 TIME 1:55 PASS 24 m= 42, sd= 0



Ch4 RES Attenuation

DAY 178 TIME 1:55 PASS 24 m= 61. sd= 0

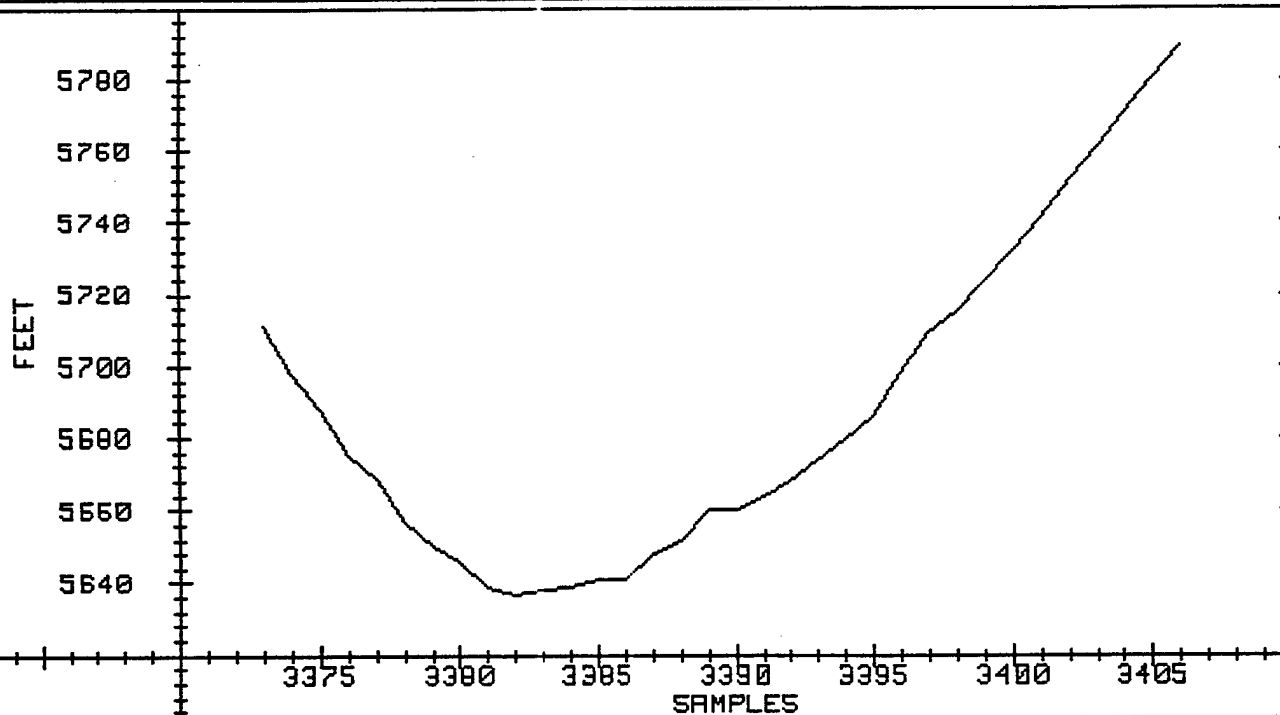


# GPS ALTITUDE

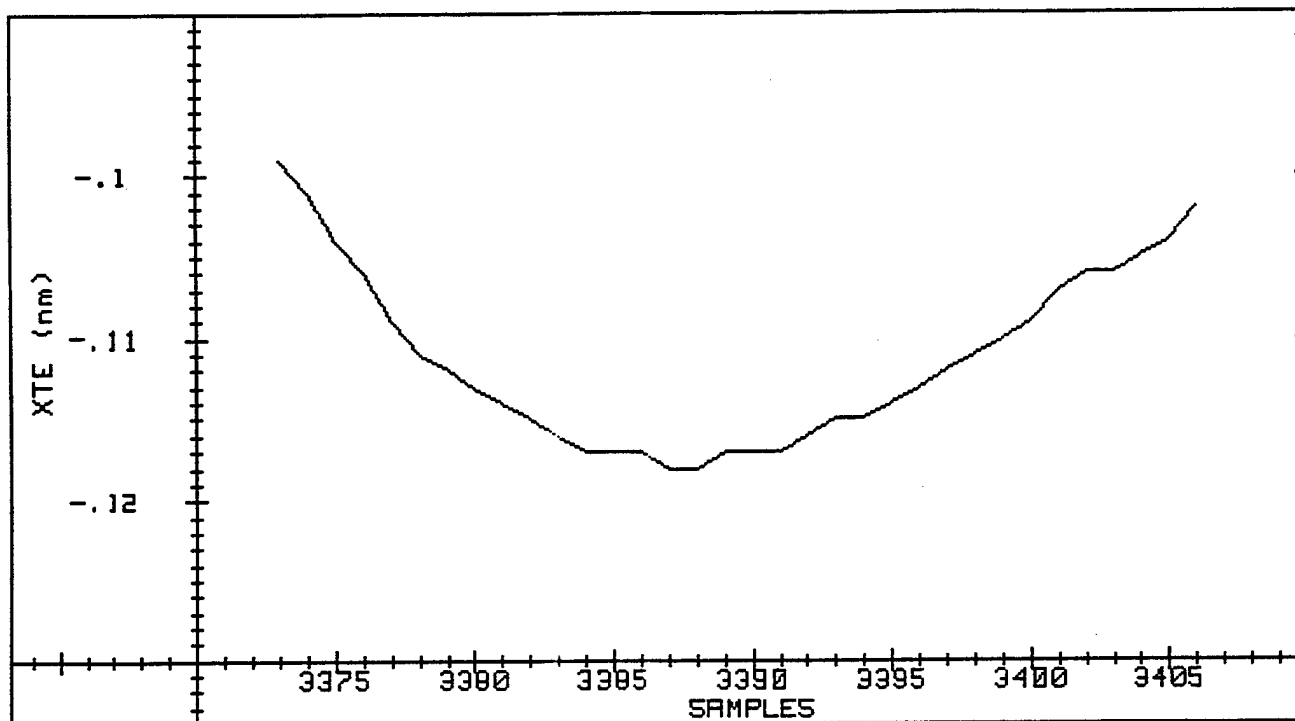
MEAN= 5687.94 STANDARD DEVIATION= 44.5315

DATE: June 26, 1995 PASS 24

OFF  
ON  
BAR

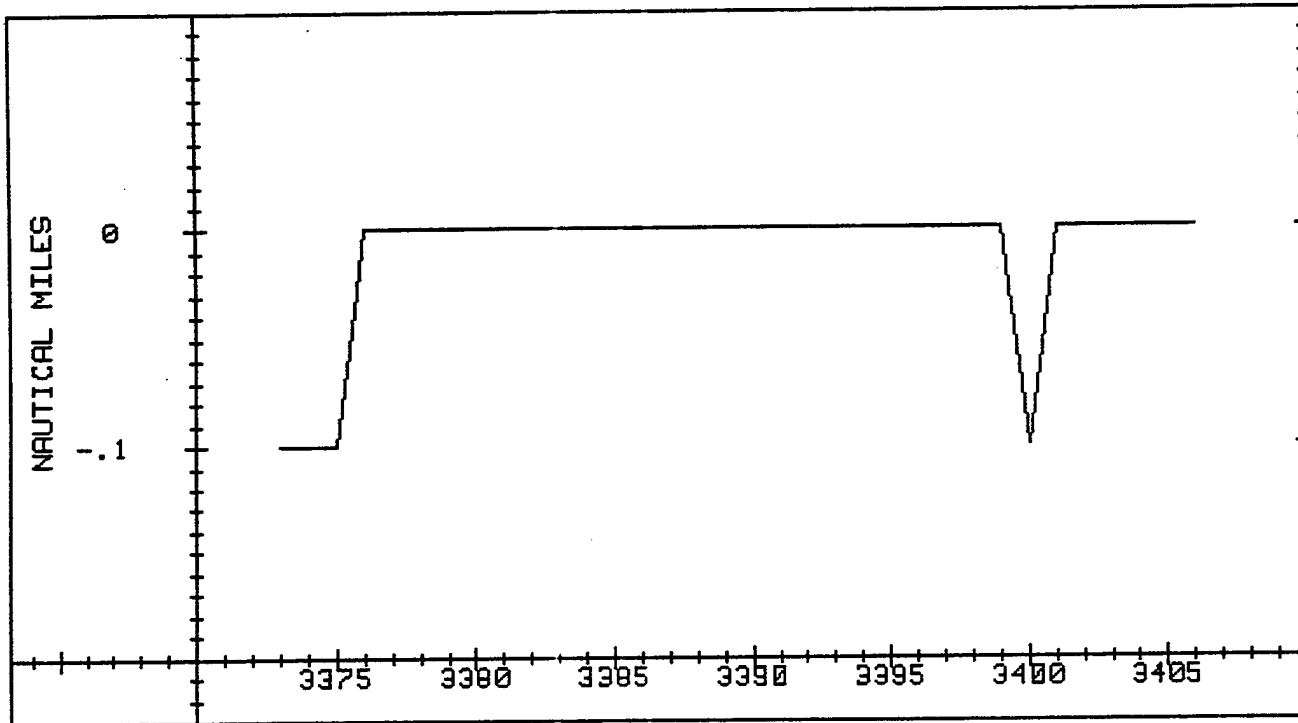


GPS Cross Track Error  
MEAN= -.111265      STANDARD DEVIATION= .00541408  
DATE: June 26, 1995      PASS 24



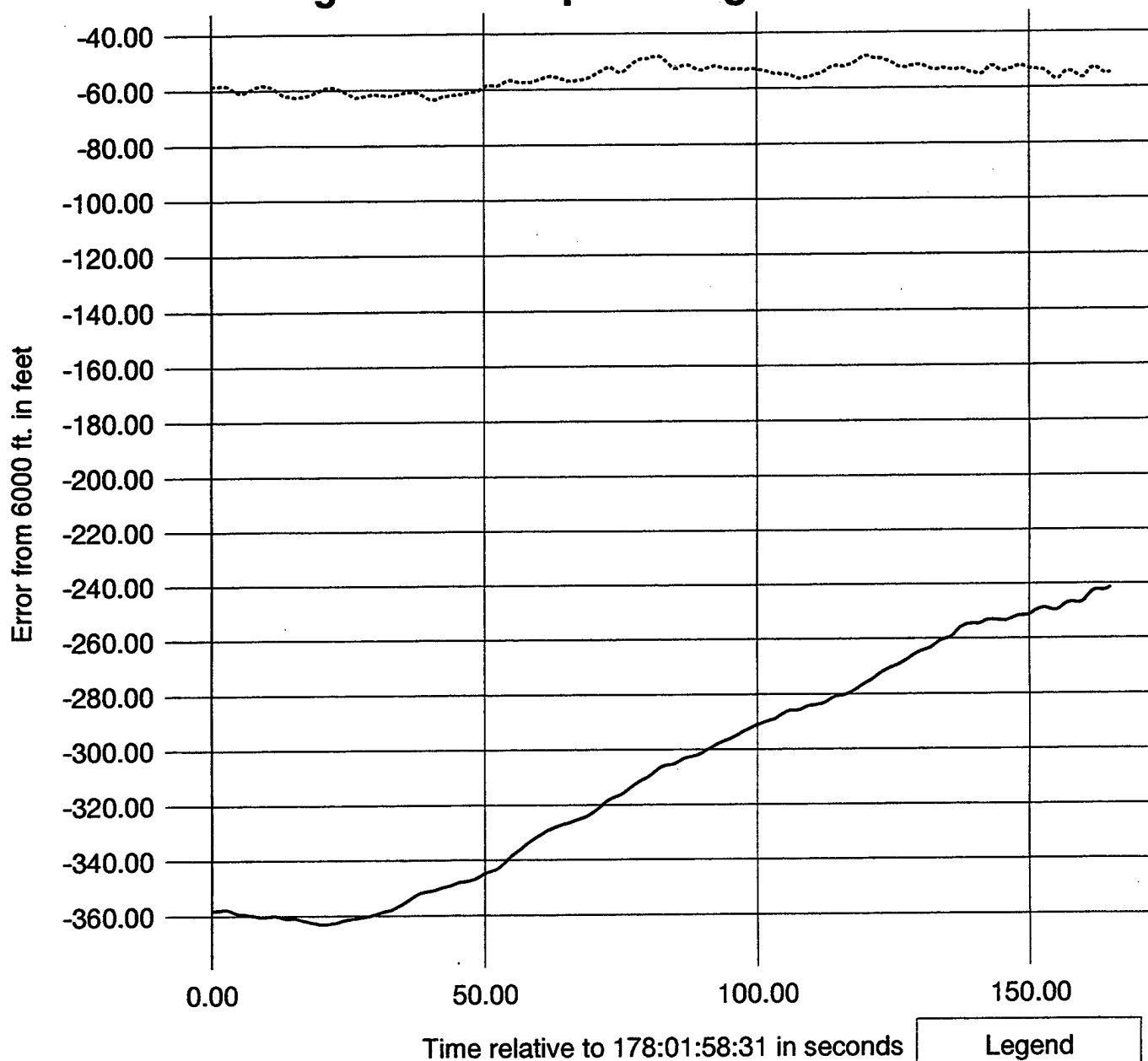
INS CROSS TRACK ERROR

MEAN= -.0117647      STANDARD DEVIATION= .032219  
DATE: June 26, 1995      PASS 24





# **Portage, ME - June 26, 1995 - Pass 24 - Xtk. and Alt. Errors** **Higher alt. and port are greater than zero**



	Mean	St. Dev.
ALT.	-55.78	3.94
XTK.	-308.31	40.88

Legend	
—	P5-xt
.....	P5-alt

27 Jun 1995  
Tape: E1423

Post-line Data Sheet  
Line 45  
Mission: PORTAGE MAINE, DAY

Time: 178:02:11:05  
Pass 25  
Req.# 24

#### AIRCRAFT & CHANNEL DATA

Altitude			CH 1	CH 2	CH 3	CH 4
Desired:	6000 ft	Wave/Pol.:	p-VV	p-VH	p-HV	p-HH
Baro:	5854 ft s.d.=	4 Swath Ctr Ang:	15.0°	15.0°	15.0°	15.0°
Slt. rng:	20632 ft	Tgt Dep Ang:	15.0°	15.0°	15.0°	15.0°
Look:	Right	St rng (ft):	19097	19097	19097	19097
Depr Ang:	25.0°	Near Rng Dep:	17.8°	17.8°	17.8°	17.8°
Des. trk:	126.0°	Far Rng Dep:	9.6°	9.6°	9.6°	9.6°
Start Sq:	90.0°	Atten (dB):	47.0	47.0	44.0	56.0
End Sq:	90.0°	RMS Video (%FS)	28.2	28.7	24.7	16.1

#### WAYPOINTS

Line up:	N 46:57.33	W 68:47.84	Main Target:	GP
Start:	N 46:50.30	W 68:33.66	Mocomp Point:	
End:	N 46:44.43	W 68:21.89	Lat:	N 46:44.73
			Long:	W 68:30.56
From:	N 54:27.95	W 91:52.44	Tgt Trk:	0.0
To:	N 35:38.50	W 51:55.06	Tgt Vel:	0.0
			Alt:	660.0 ft

#### RADAR PARAMETERS - for UWB

RTP Channel:	1	Filter damping is Hi	->	10 sec
Resolution:	N/A	PRF Factor is FAST	(262.5 kts)	-
Swath width:	Single	Ave Gndspd:	Real	->
RMS Time Constant:	2^7	Mocomp Off for Chnl	1, 2, 3, 4	
Position Reference:	ON	GPS Vel/Pos Reference		
Atten. Tracking:	OFF	Adj Gnd Scene:	5000.0 ft	
Range Gate Delta:	0.0 ft	Range Tracking is	OFF	
Azimuth Presum Rate:	Presum6	Clutterlock Reference:	OFF	
TX Chirp Filename:	CTL1U2B	RX Chirp Filename:	CRL1N0A	
Ave Ref Vel ->	.2 fps (s.d.=	1.0)		
Ave Fil Vel ->	1.5 fps (s.d.=	.7)		

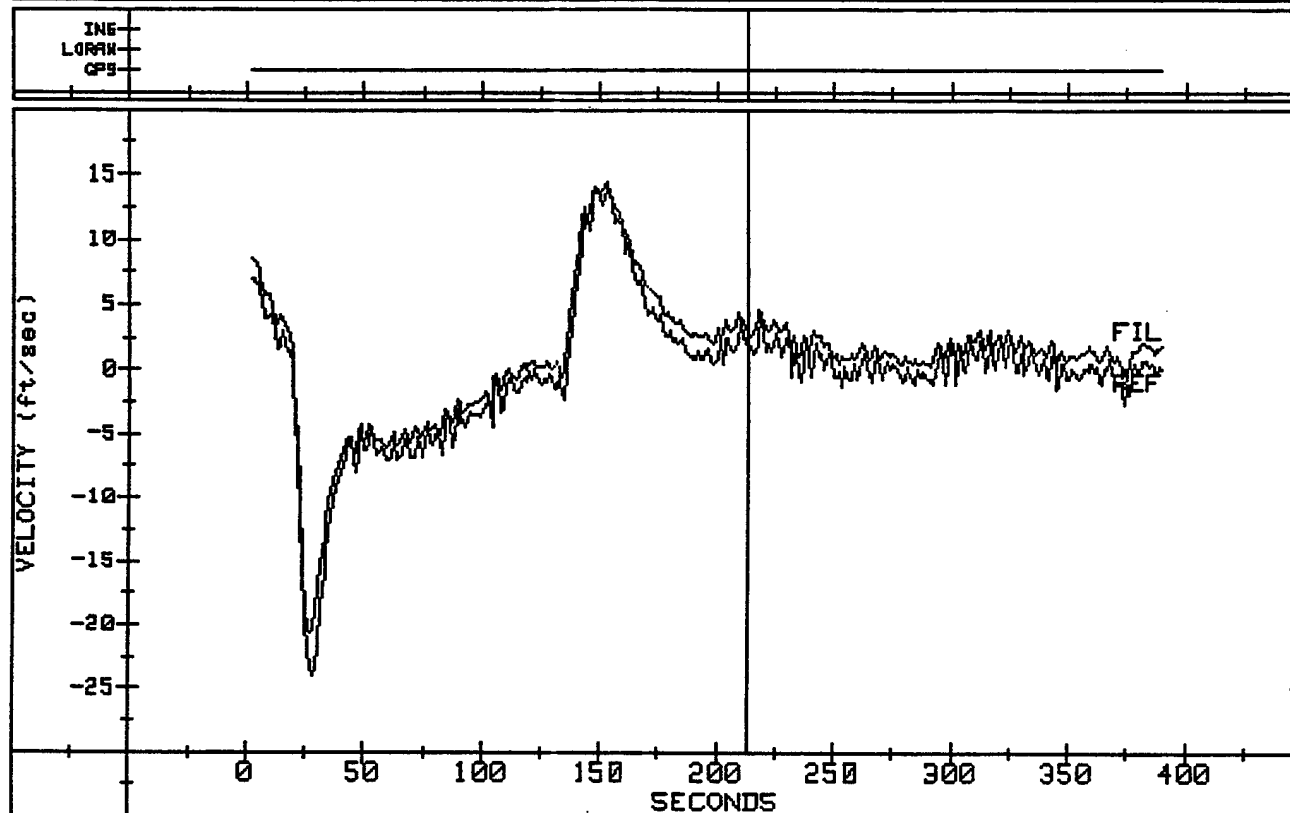
NML XMIT PWR	ANT BIAS	Tape Footage	Drive no.
X: -70.0	Elevation:	0.0°	
L: -70.0	Azimuth:	0.0°	
C: -70.0	Pitch:	0.0°	
P: 46.3			
		Starting:	9008 ft (1)
		Ending:	10264 ft (1)

Vel Bias	CAL Atten	LINE Map Time (UCT)
X: 1035.0	X: 63.8 dB	Start: 02:11:05
Y: -433.0	L: 63.8 dB	End: 02:13:47
Z: 6697.0	C: 63.8 dB	

#### Mocomp Counters

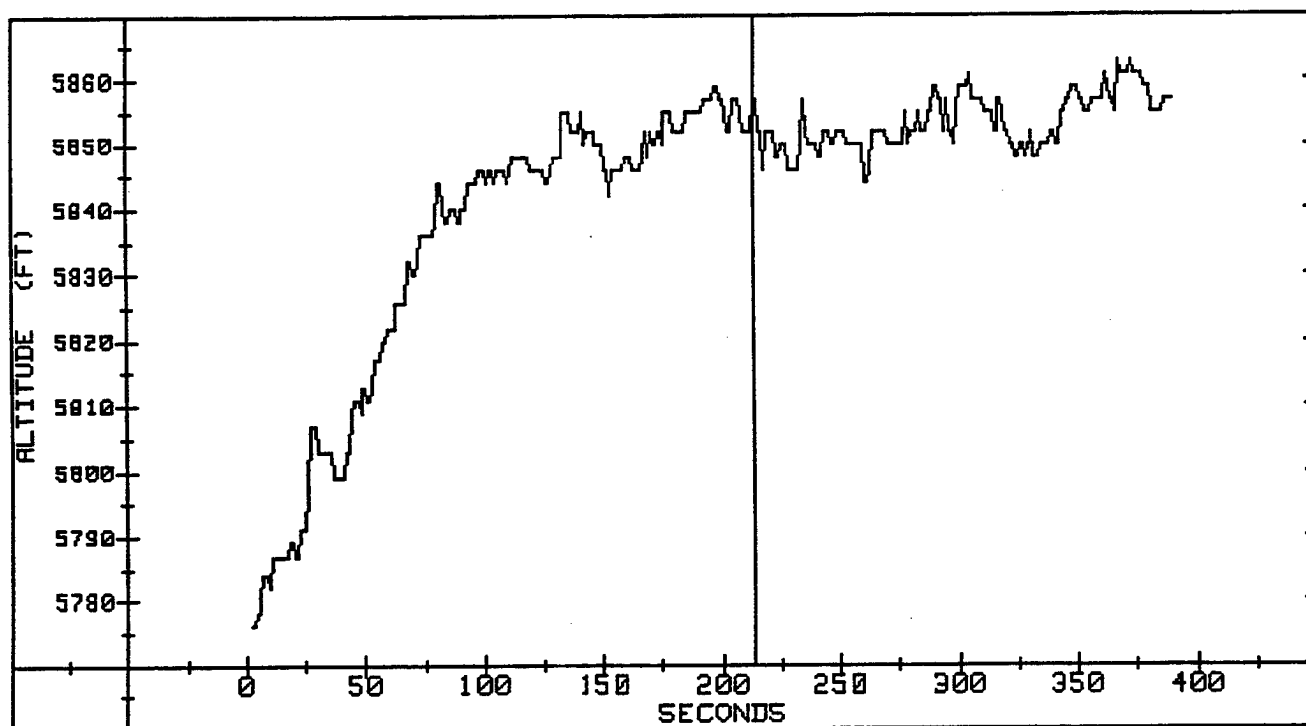
Start:	1442390	00160256h	CPA (UCT):	00:00:00
End:	1469537	00166C61h	Alt:	0 ft (GPS)
			Lat: N	0:00: 0
			Lon: E	0:00: 0

FILTERED vs. REF. VELOCITY  
DAY 170 TIME 2:7 PASS 25



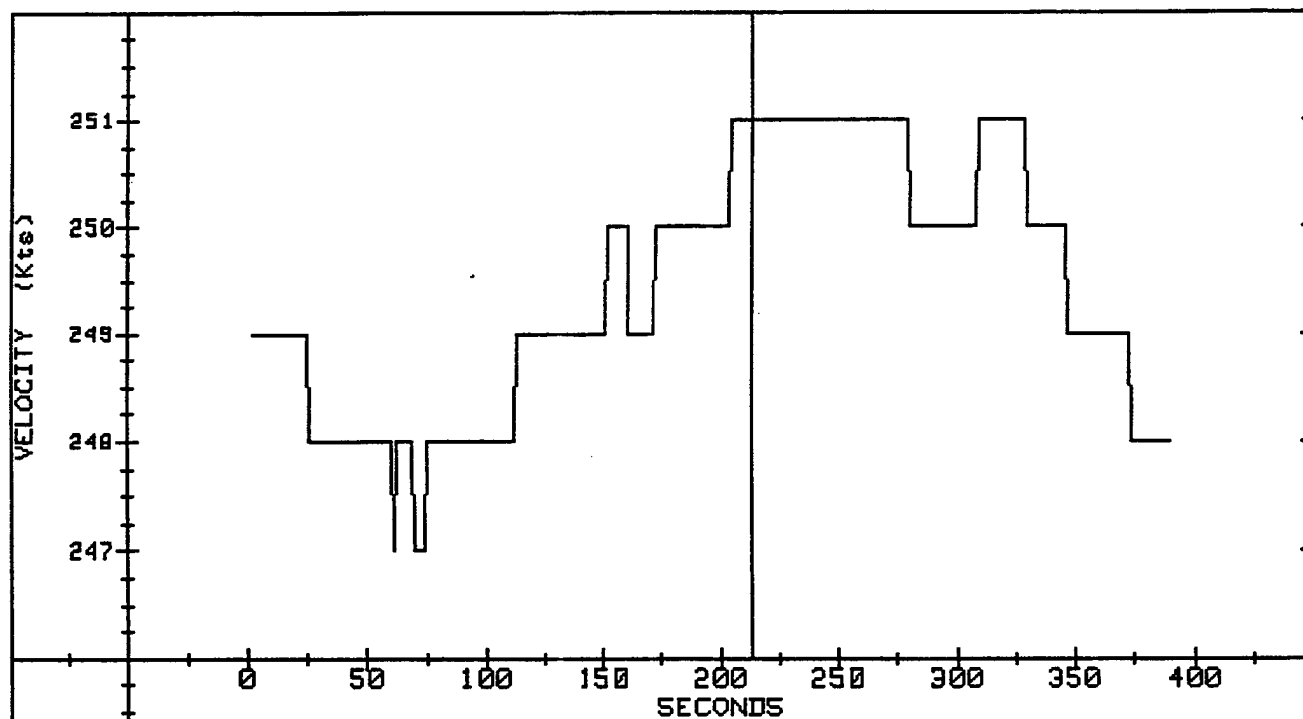
BARO ALTITUDE

DAY 17B TIME 2:7 PASS 25 m= 5854, sd= 4.28144



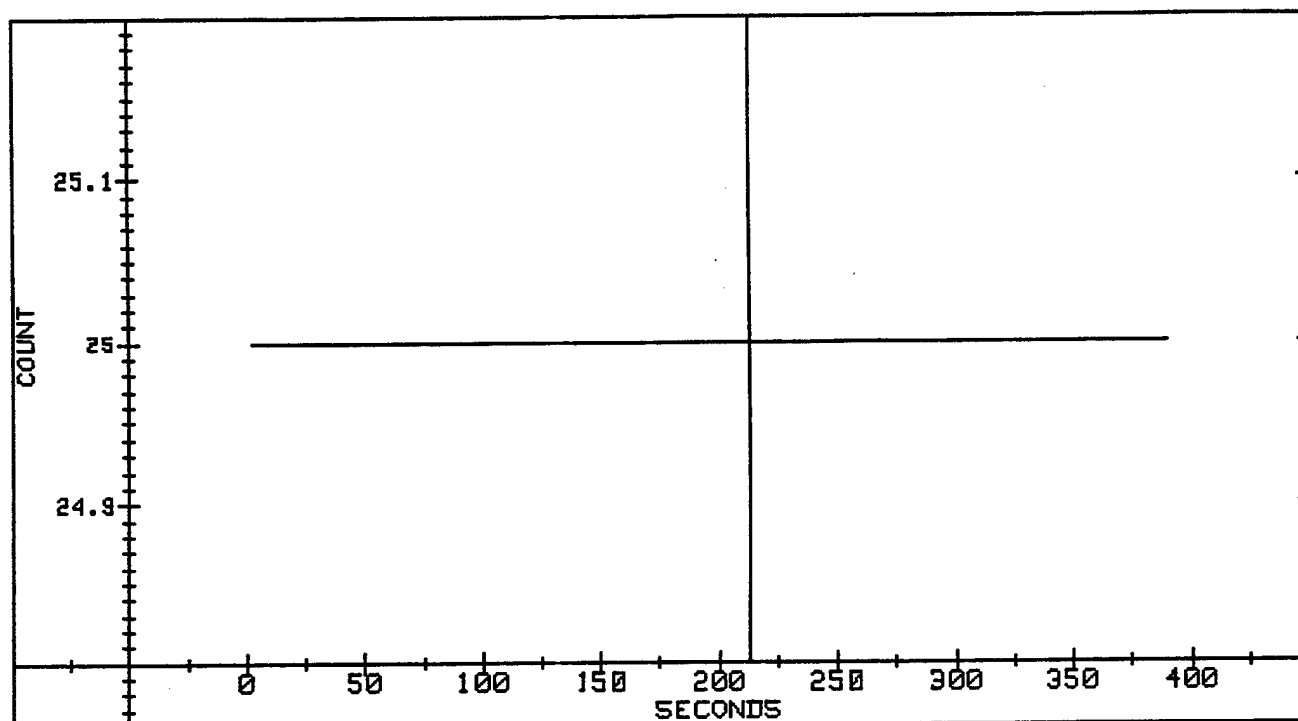
## INS GROUND SPEED

DAY 178 TIME 2:7 PASS 25 m= 250.1, sd= 1.00994



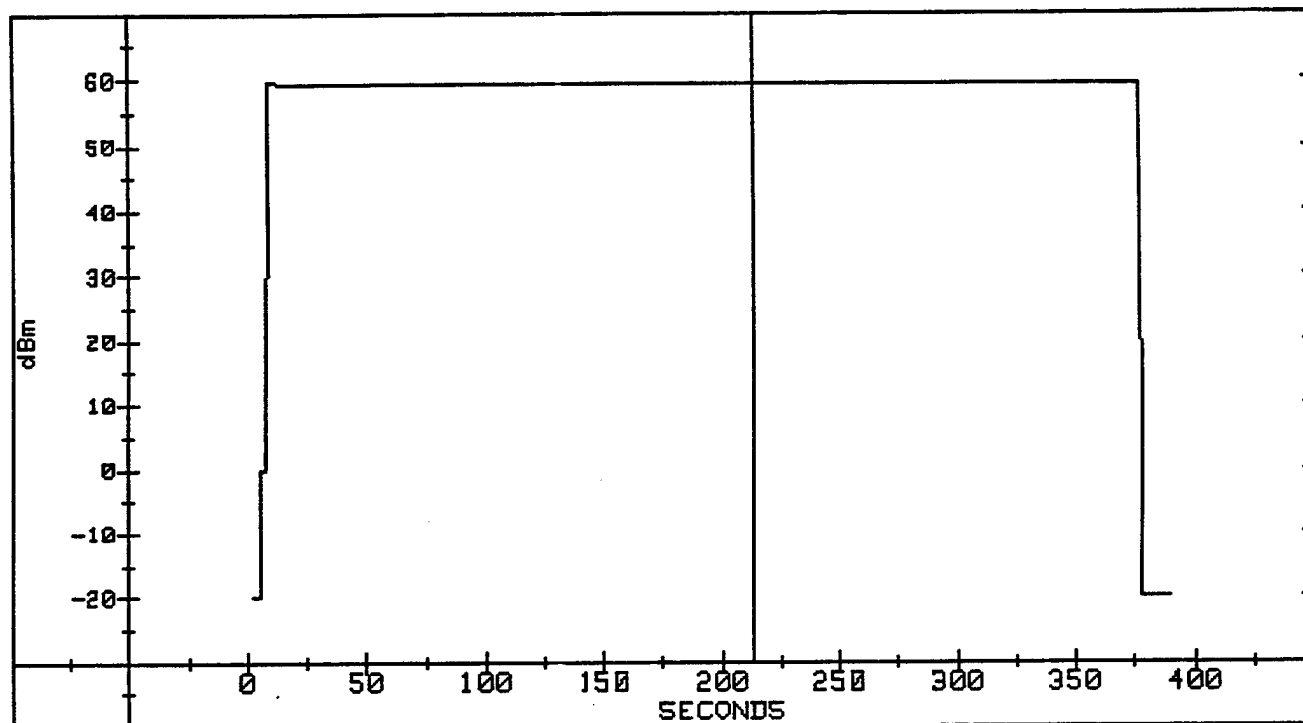
# PASS NUMBER

DAY 178 TIME 2:7 PASS 25 m= 25, sd= 0



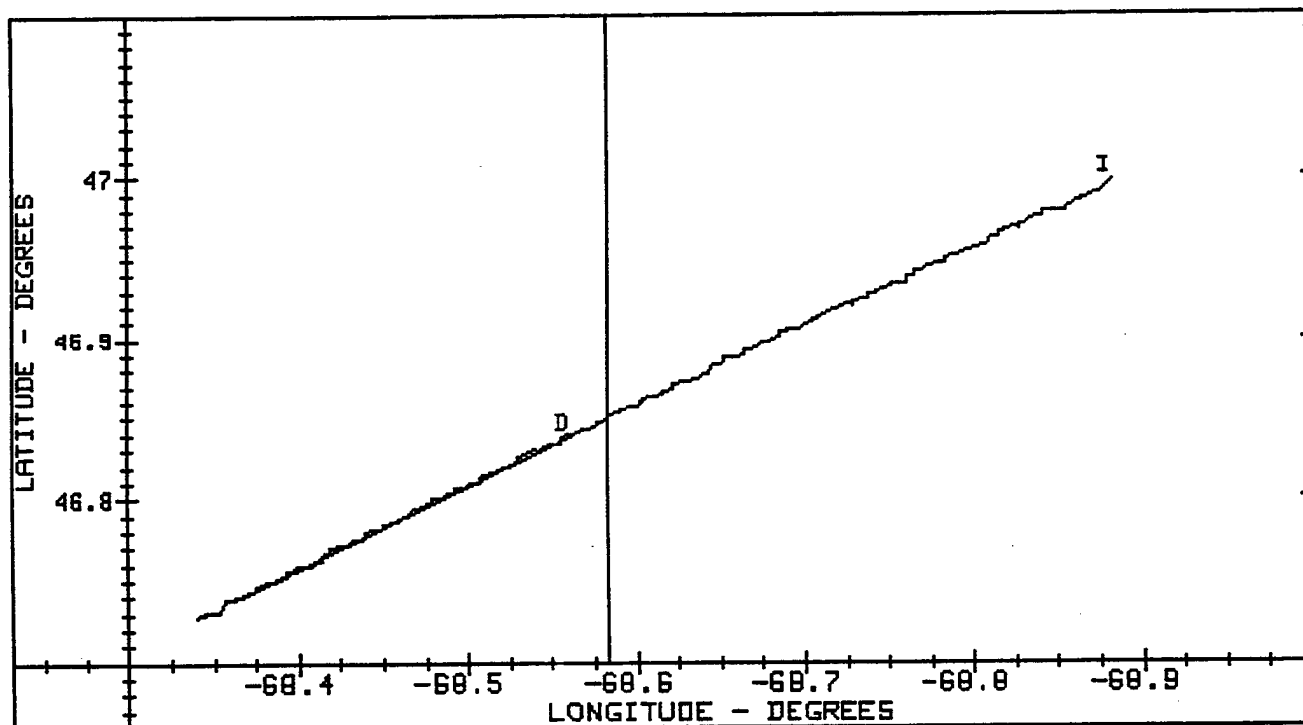
P Band Power

DAY 178 TIME 2:7 PASS 25 m= 52.79, sd= 21.4292



INS AIRCRAFT POSITION

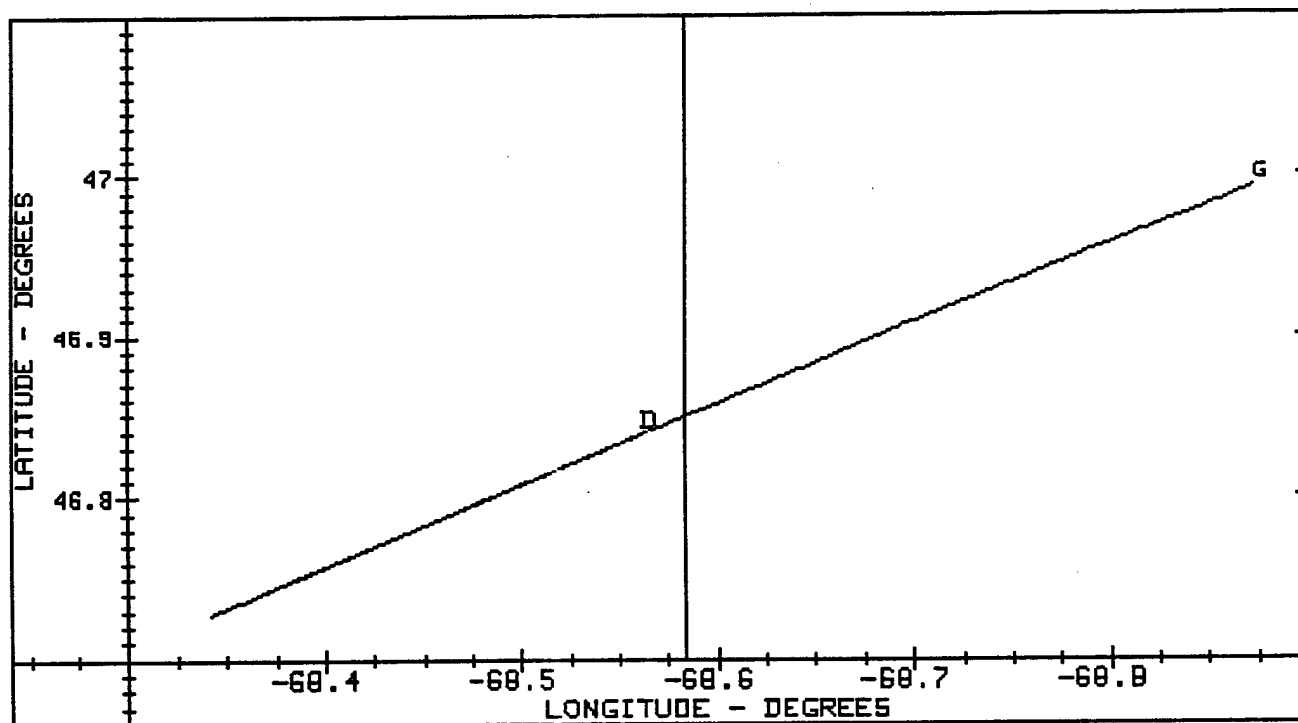
DAY 170 TIME 2:7 PASS 25





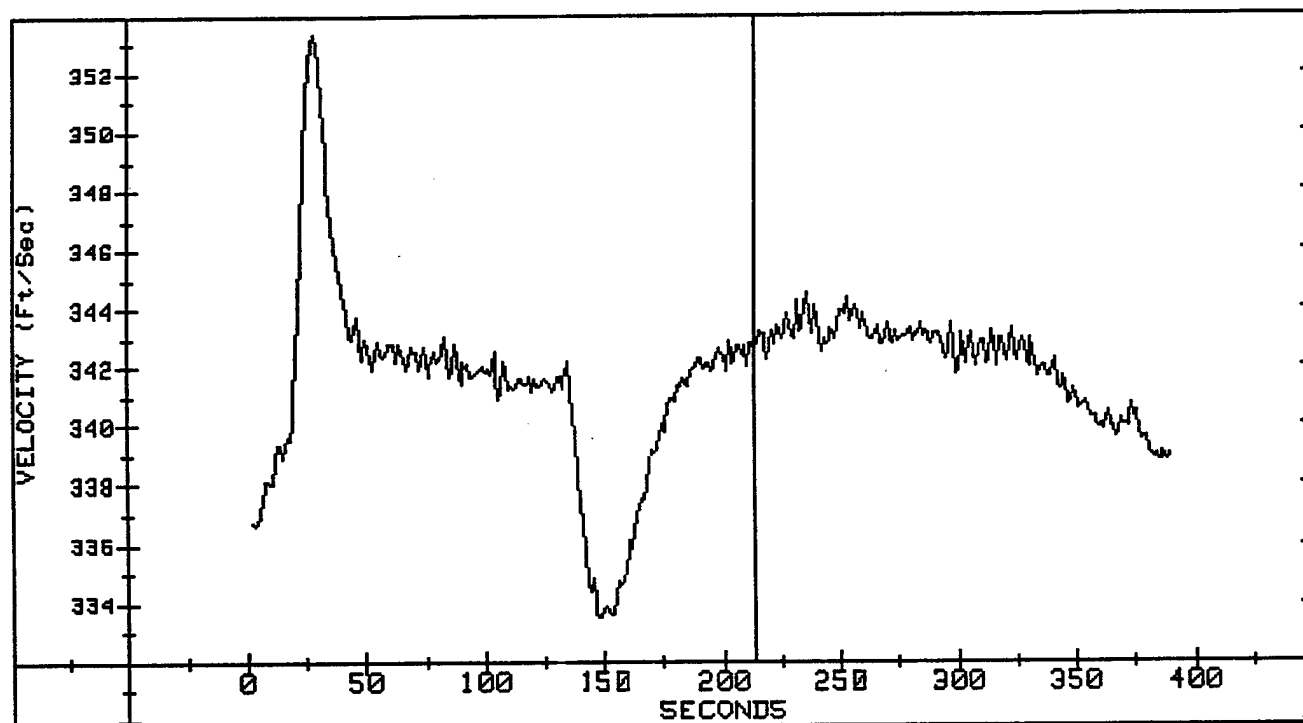
GPS AIRCRAFT POSITION

DAY 178 TIME 2:7 PASS 25



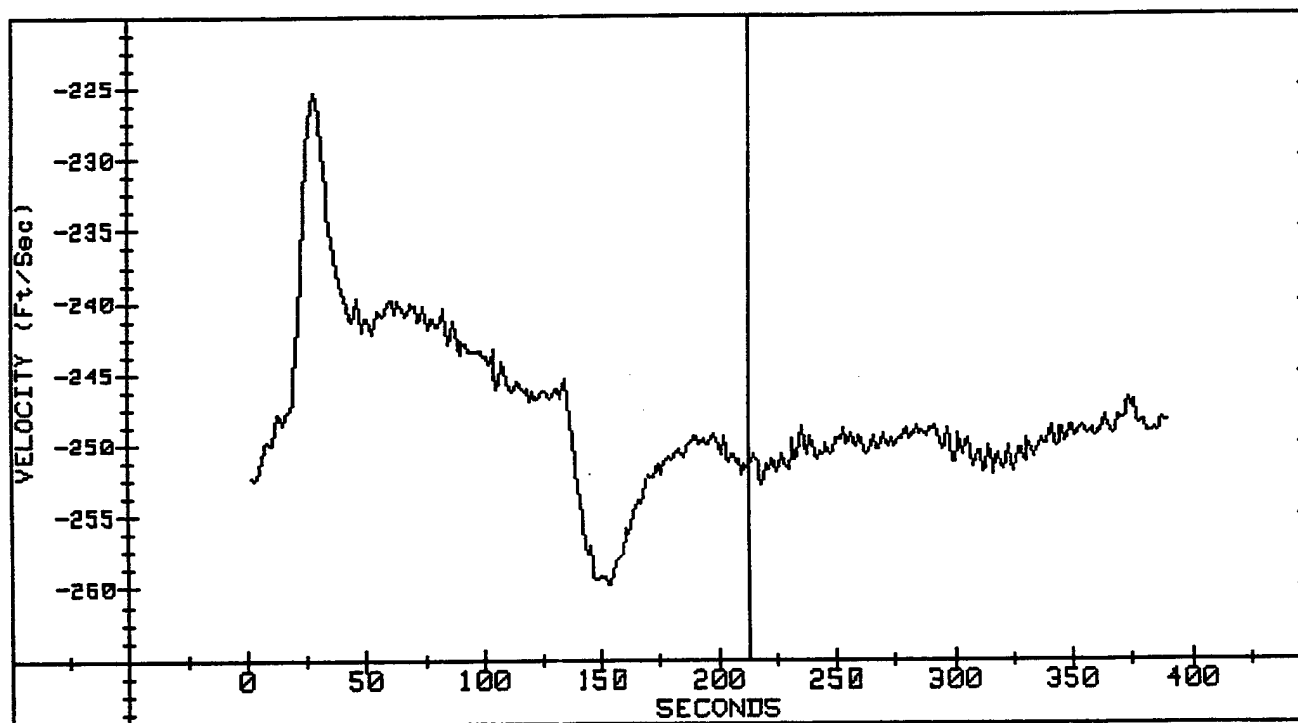
GPS V<sub>e</sub>

DAY 170 TIME 2:7 PASS 25 m= 342.1, sd= 1.47299



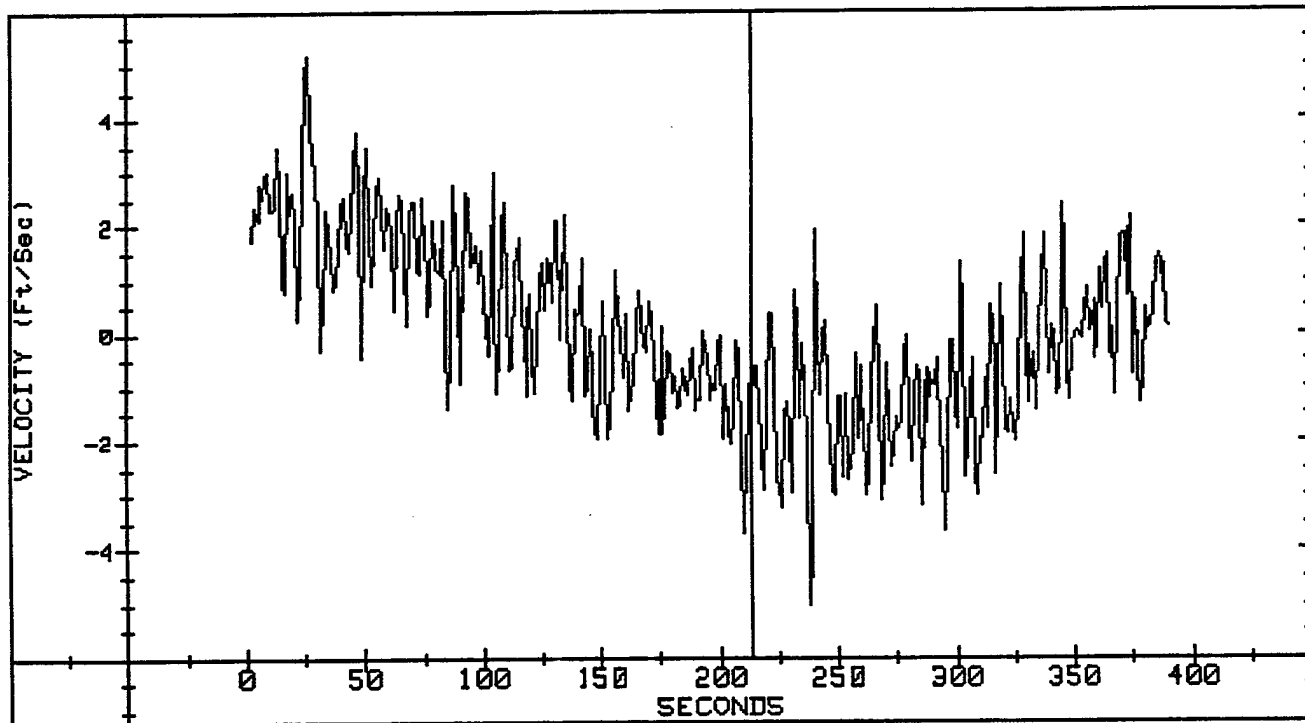
GPS Vn

DAY 170 TIME 2:7 PASS 25 m= -249.7, sd= 1.0132



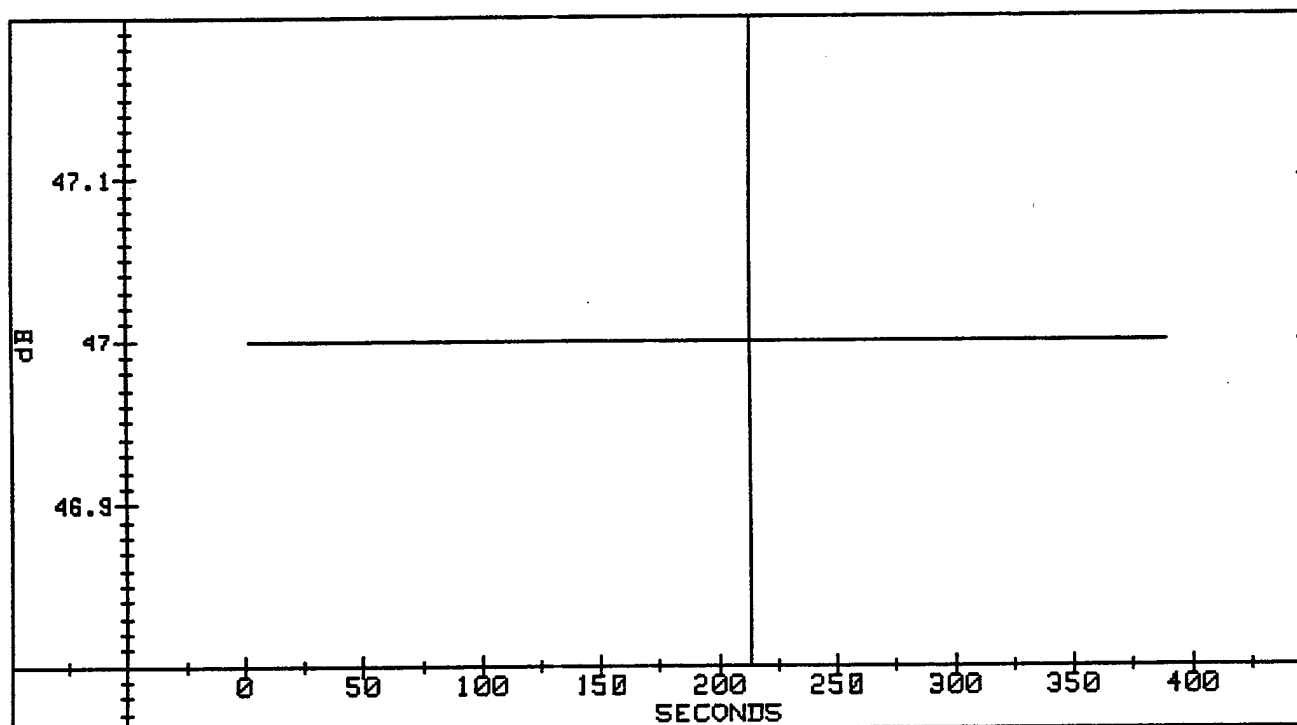
GPS Vv

DRY 178 TIME 2:7 PASS 25  $m = -.7017$ ,  $sd = 1.37436$



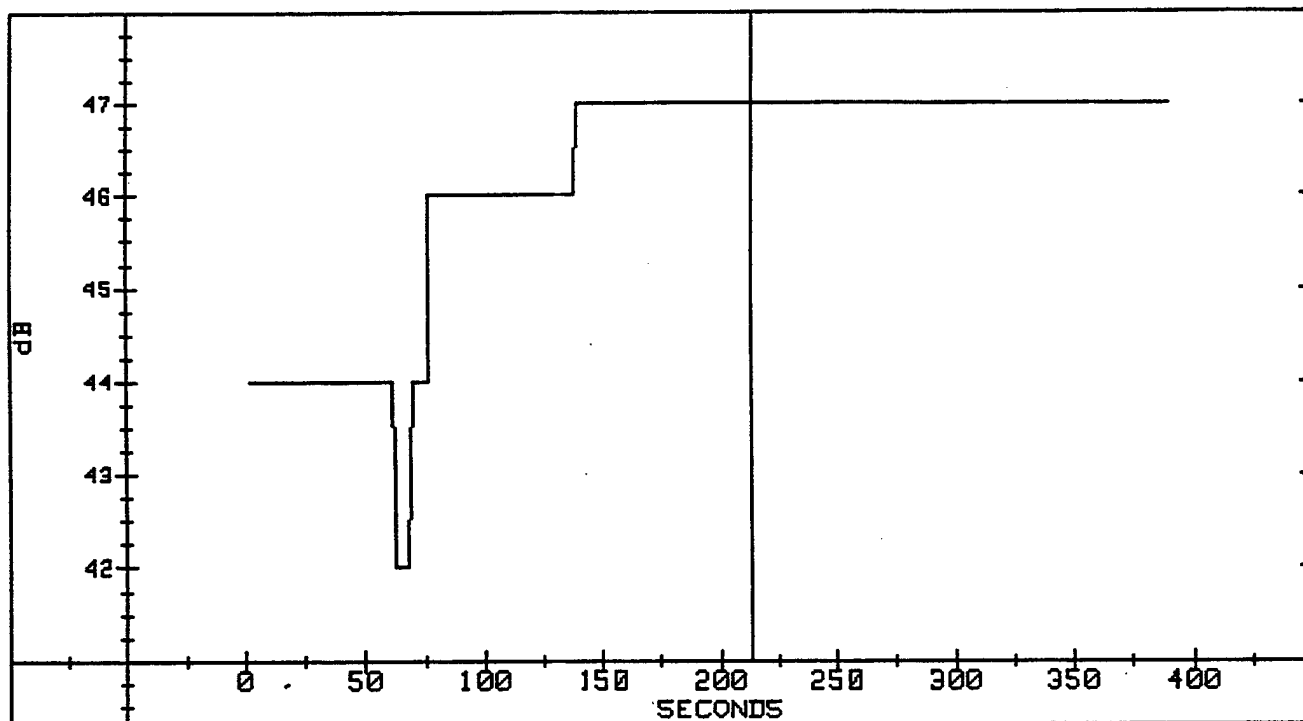
Ch1 RES Attenuation

DAY 178 TIME 2:7 PASS 25 m= 47, sd= 0



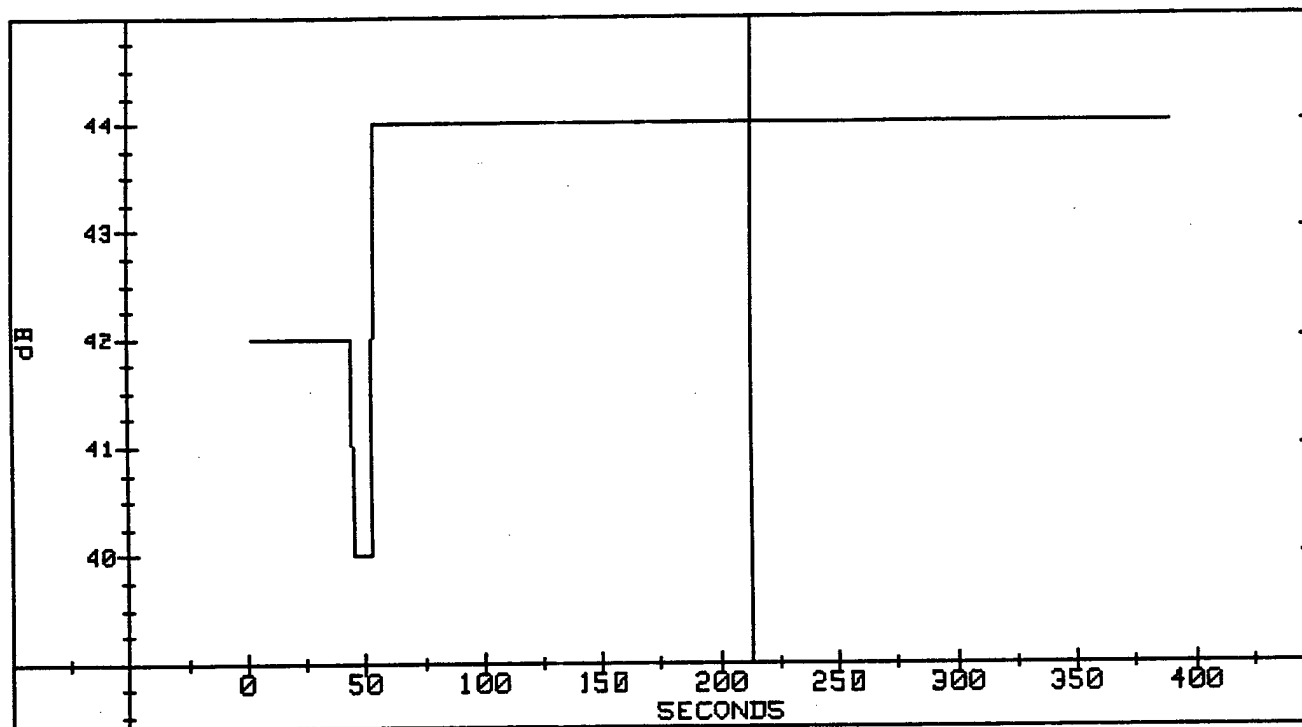
Ch2 RES Attenuation

DAY 178 TIME 2:7 PASS 25 m= 47, sd= 0



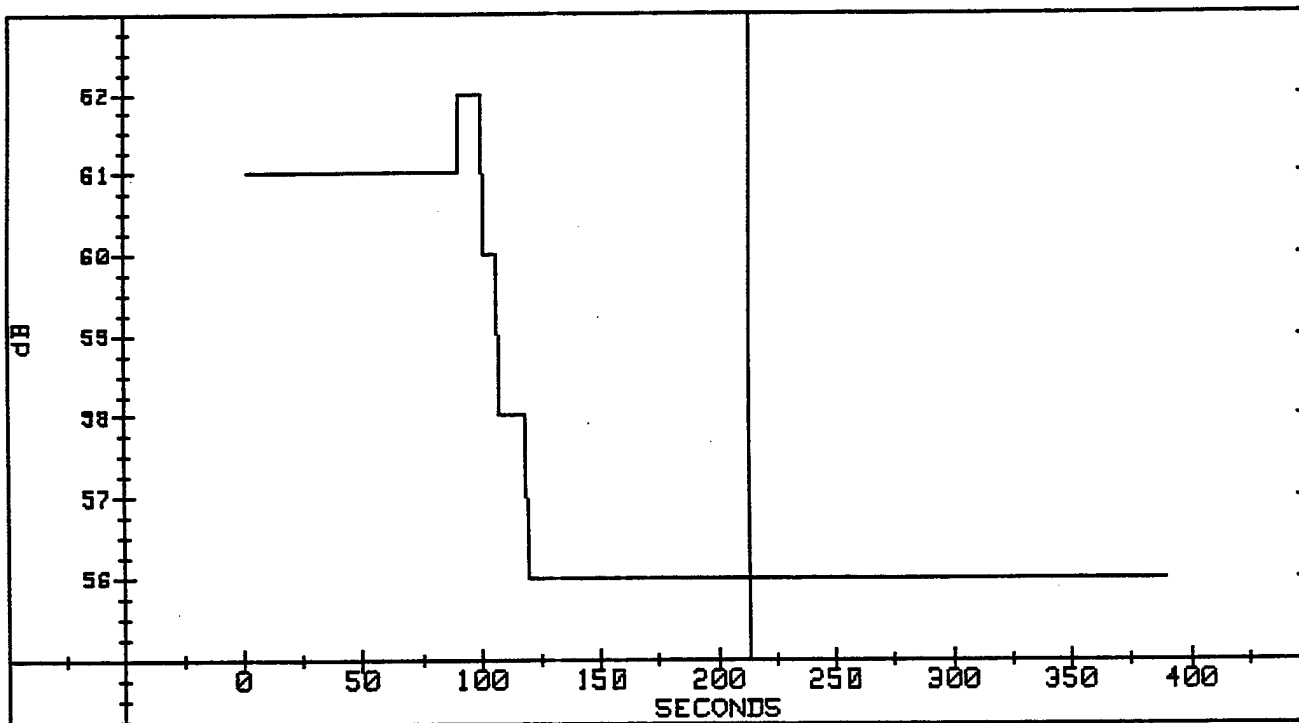
Ch3 RES Attenuation

DAY 178 TIME 2:7 PASS 25 m= 44, sd= 0



Ch4 RES Attenuation

DAY 178 TIME 2:7 PASS 25 m= 56, sd= 0



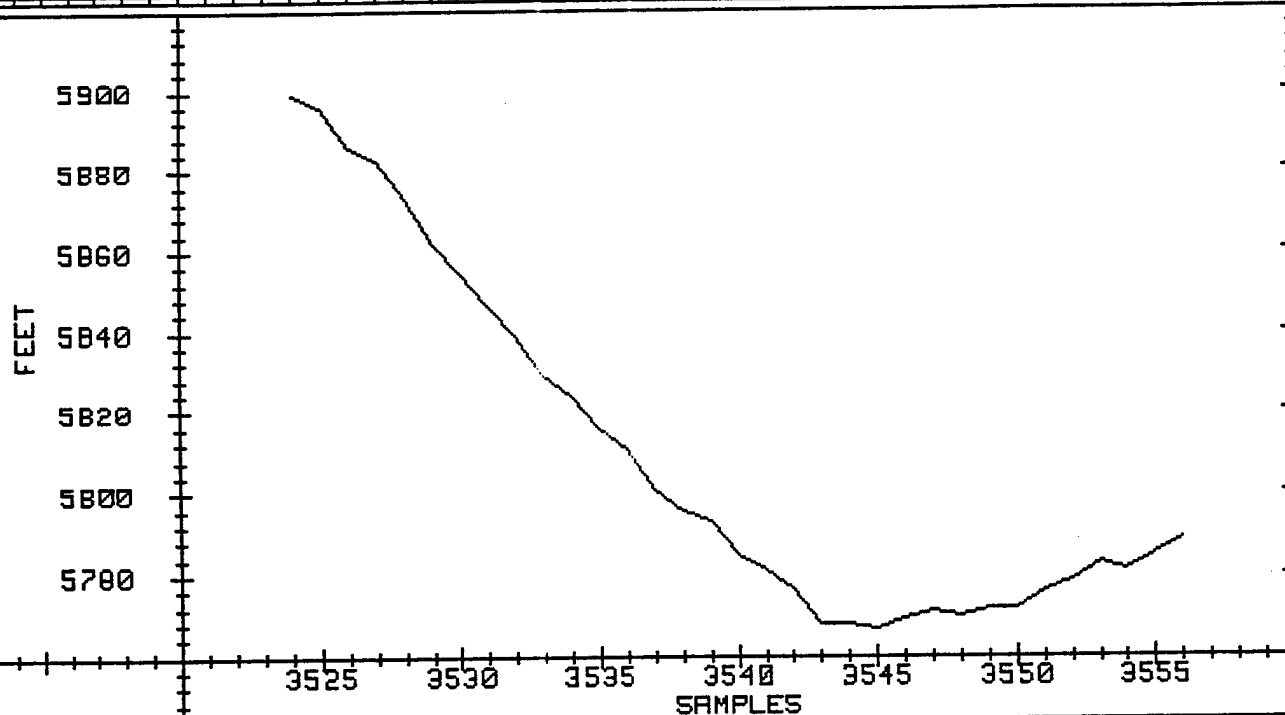


# GPS ALTITUDE

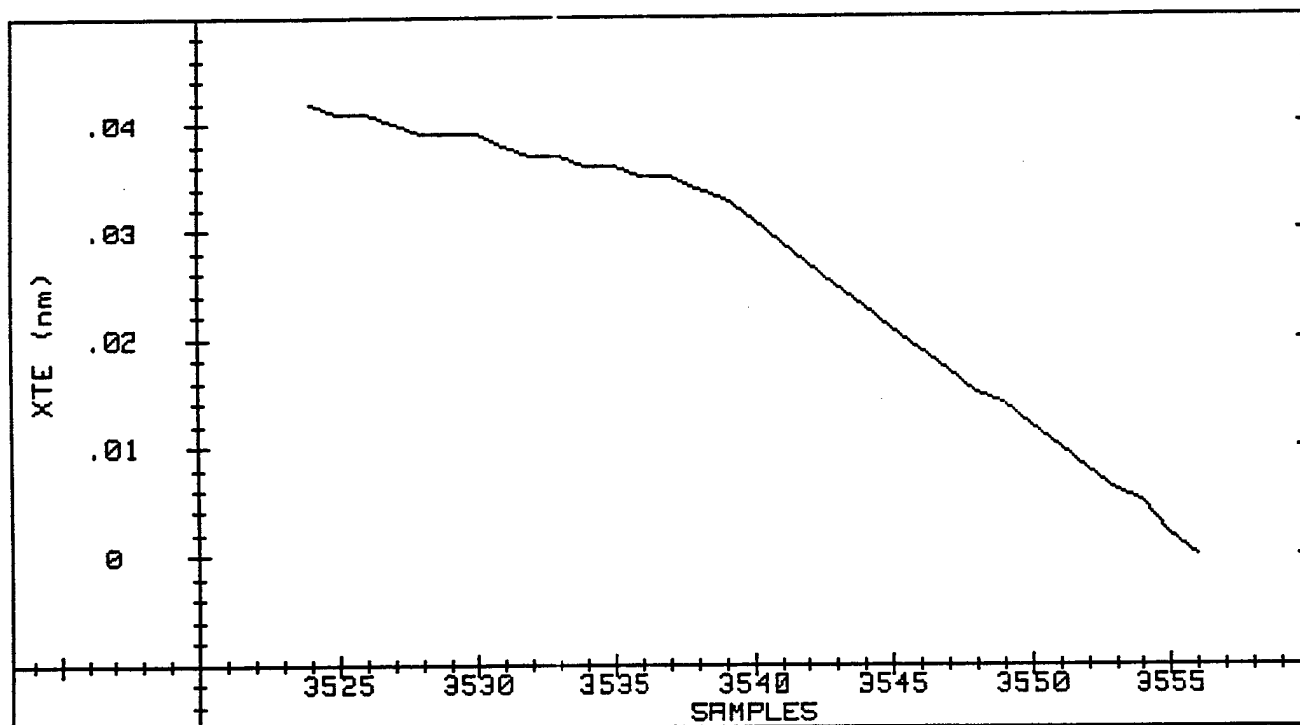
MEAN= 5809.18 STANDARD DEVIATION= 42.227

DATE: June 26, 1995 PASS 25

OFF  
ON  
BAR

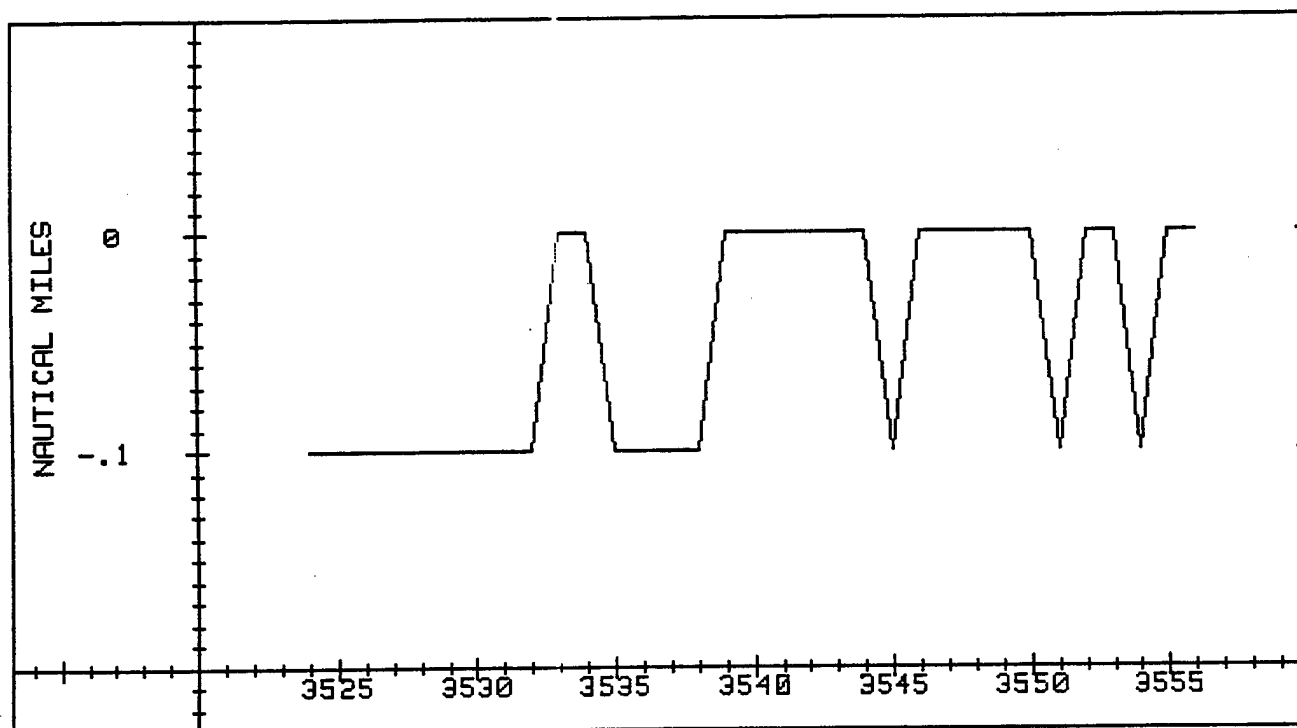


GPS Cross Track Error  
MEAN= .0262424    STANDARD DEVIATION= .0130292  
DATE: June 26, 1995    PASS 25

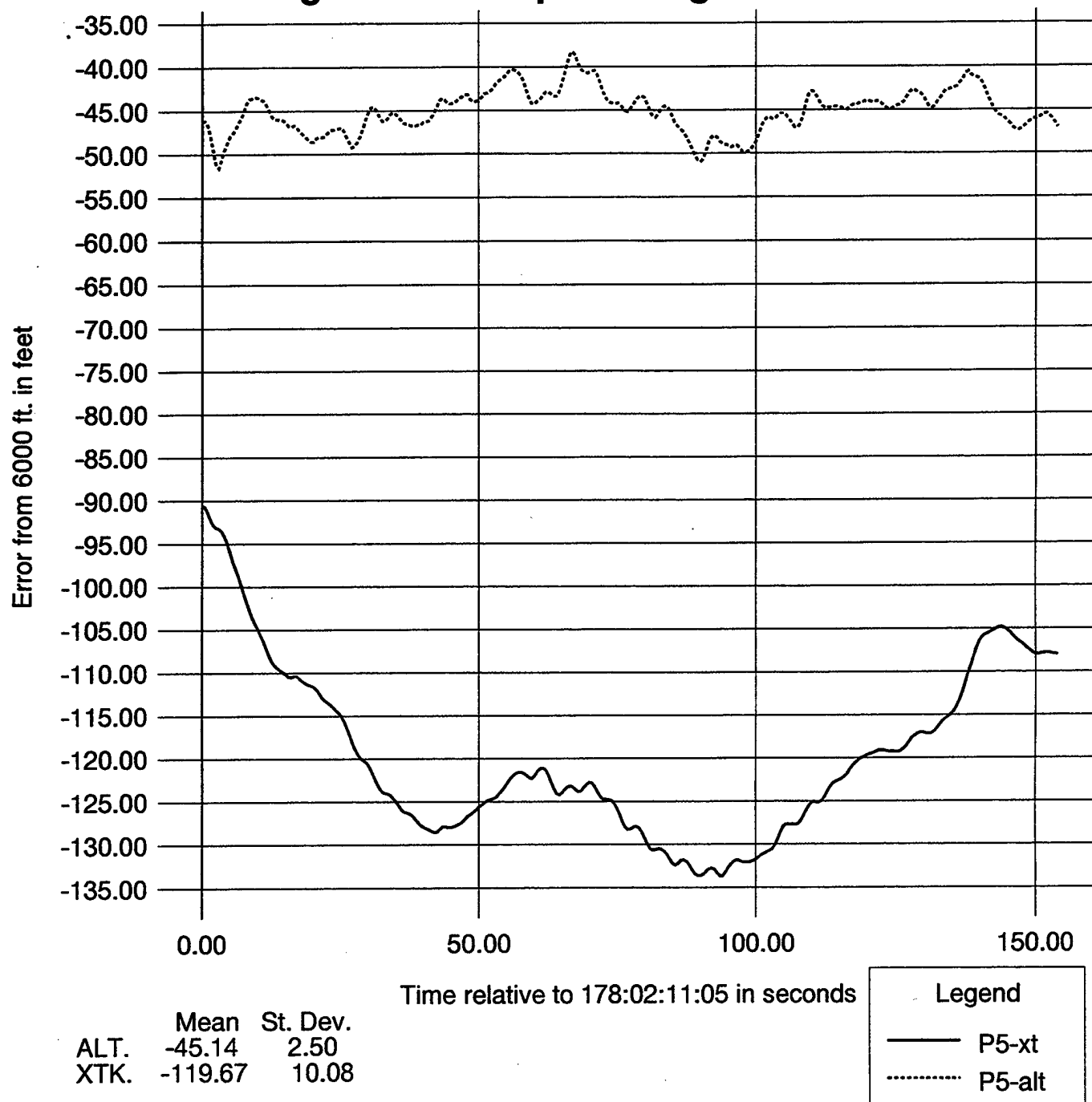


INS CROSS TRACK ERROR  
MEAN= -.0484848 STANDARD DEVIATION= .049977  
DATE: June 26, 1995 PASS 25

MEAN= -.0484848      STANDARD DEVIATION= .049577  
DATE: June 26, 1995      PASS 25



# **Portage, ME - June 26, 1995 - Pass 25 - Xtk. and Alt. Errors** **Higher alt. and port are greater than zero**



27 Jun 1995  
Tape: E1414

Post-line Data Sheet  
Line 47  
Mission: PORTAGE MAINE, DAY

Time: 178:02:22:33  
Pass 26  
Req.# 25

#### AIRCRAFT & CHANNEL DATA

Altitude			CH 1	CH 2	CH 3	CH 4
Desired:	6000 ft	Wave/Pol.:	p-VV	p-VH	p-HV	p-HH
Baro:	5845 ft s.d.=	3 Swath Ctr Ang:	15.0°	15.0°	15.0°	15.0°
Slt. rng:	20084 ft	Tgt Dep Ang:	15.0°	15.0°	15.0°	15.0°
Look:	Right	St rng (ft):	18544	18544	18544	18544
Depr Ang:	25.0°	Near Rng Dep:	18.4°	18.4°	18.4°	18.4°
Des. trk:	276.0°	Far Rng Dep:	9.7°	9.7°	9.7°	9.7°
Start Sq:	90.0°	Atten (dB):	47.0	45.0	44.0	56.0
End Sq:	90.0°	RMS Video (%FS)	24.5	32.2	20.5	17.0

#### WAYPOINTS

	Latitude	Longitude
Line up:	N 46:39.29	W 68:04.91
Start:	N 46:40.59	W 68:22.23
End:	N 46:41.63	W 68:36.69
From:	N 42:35.05	W 45:46.38
To:	N 45:52.31	W 92:35.10

Main Target: CALCS

Mocomp Point:

Lat: N 46:44.29

Long: W 68:28.98

Tgt Trk: 0.0 Tgt Vel: 0.0

Alt: 802.0 ft

#### RADAR PARAMETERS - for UWB

RTP Channel: 1  
Resolution: N/A  
Swath width: Single  
RMS Time Constant: 2^7  
Position Reference: ON  
Atten. Tracking: OFF  
Range Gate Delta: 0.0 ft  
Azimuth Presum Rate: Presum6  
TX Chirp Filename: CTL1U2B

Filter damping is Hi -> 10 sec  
PRF Factor is FAST (262.5 kts)  
Ave Gndspd: Real -> 253.8 kts  
Mocomp Off for Chnl 1, 2, 3, 4  
GPS Vel/Pos Reference  
Adj Gnd Scene: 5000.0 ft  
Range Tracking is OFF  
Clutterlock Reference: OFF  
RX Chirp Filename: CRL1N0A

Ave Ref Vel -> -.4 fps (s.d.= 5.6)  
Ave Fil Vel -> -2.2 fps (s.d.= 5.4)

NML XMIT PWR	ANT BIAS	Tape Footage	Drive no.
X: -70.0	Elevation: 0.0°	Starting: 201 ft	(2)
L: -70.0	Azimuth: 0.0°	Ending: 1462 ft	(2)
C: -70.0	Pitch: 0.0°		
P: 46.4			

Vel Bias	CAL Atten
X: 1035.0	X: 63.8 dB
Y: -433.0	L: 63.8 dB
Z: 6697.0	C: 63.8 dB

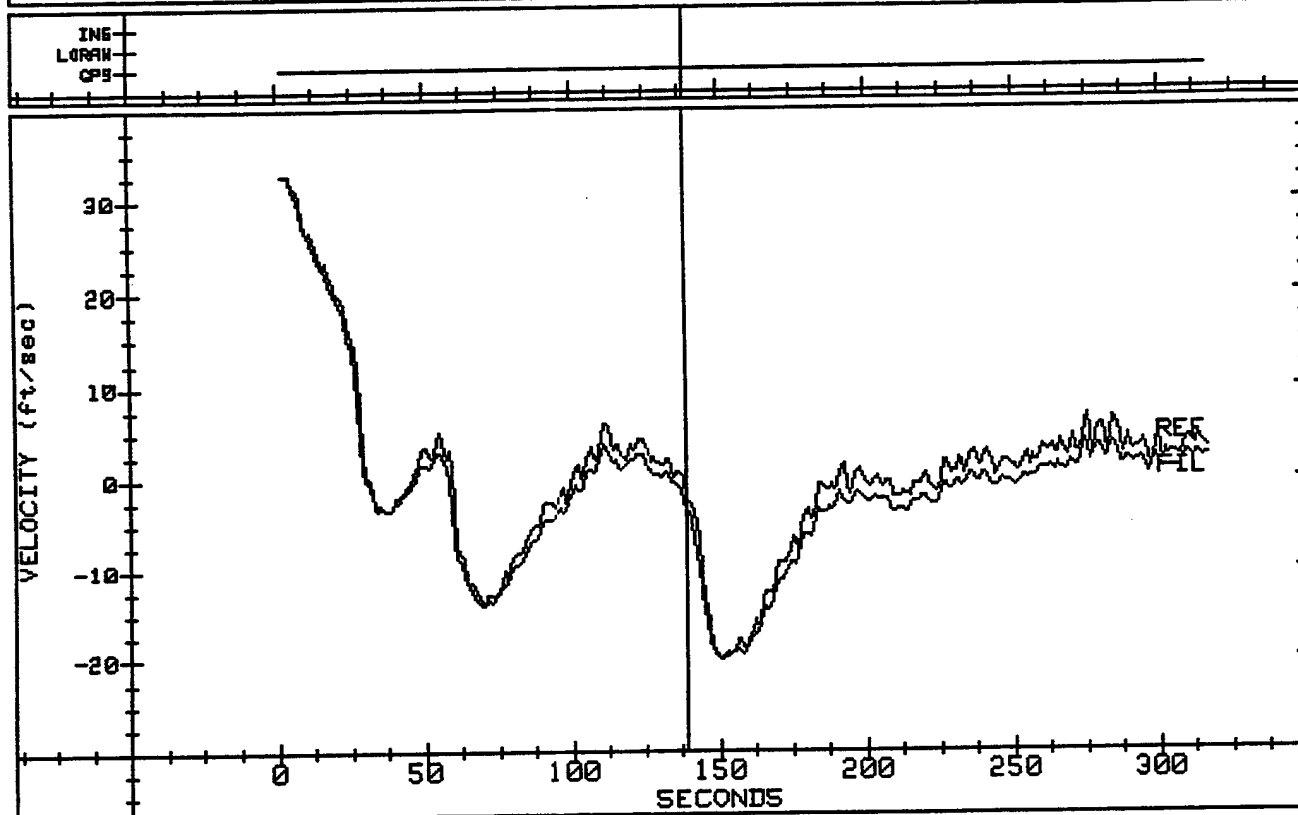
LINE Map Time (UCT)  
Start: 02:22:33  
End: 02:25:13

#### Mocomp Counters

Start: 1495751 0016D2C7h  
End: 1522549 00173B75h

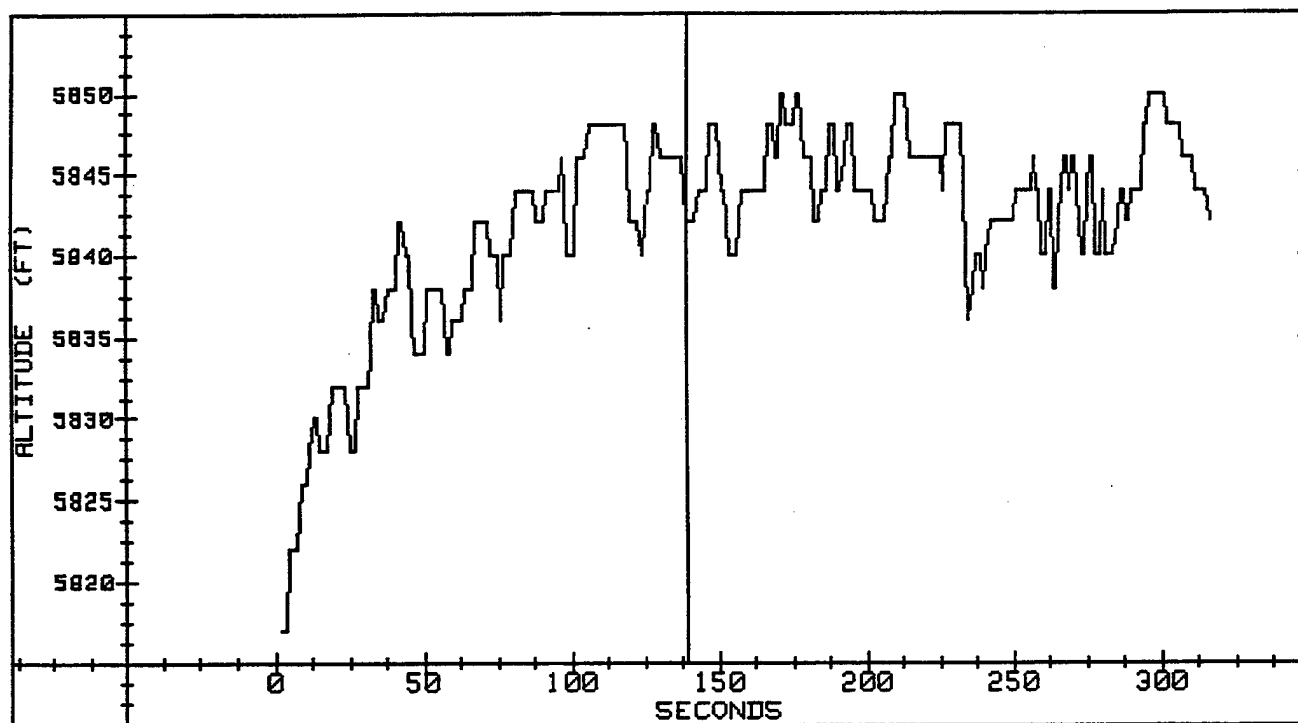
CPA (UCT): 00:00:00  
Alt: 0 ft (GPS)  
Lat: N 0:00: 0  
Lon: E 0:00: 0

FILTERED vs. REF. VELOCITY  
DAY 178 TIME 2:19 PASS 26



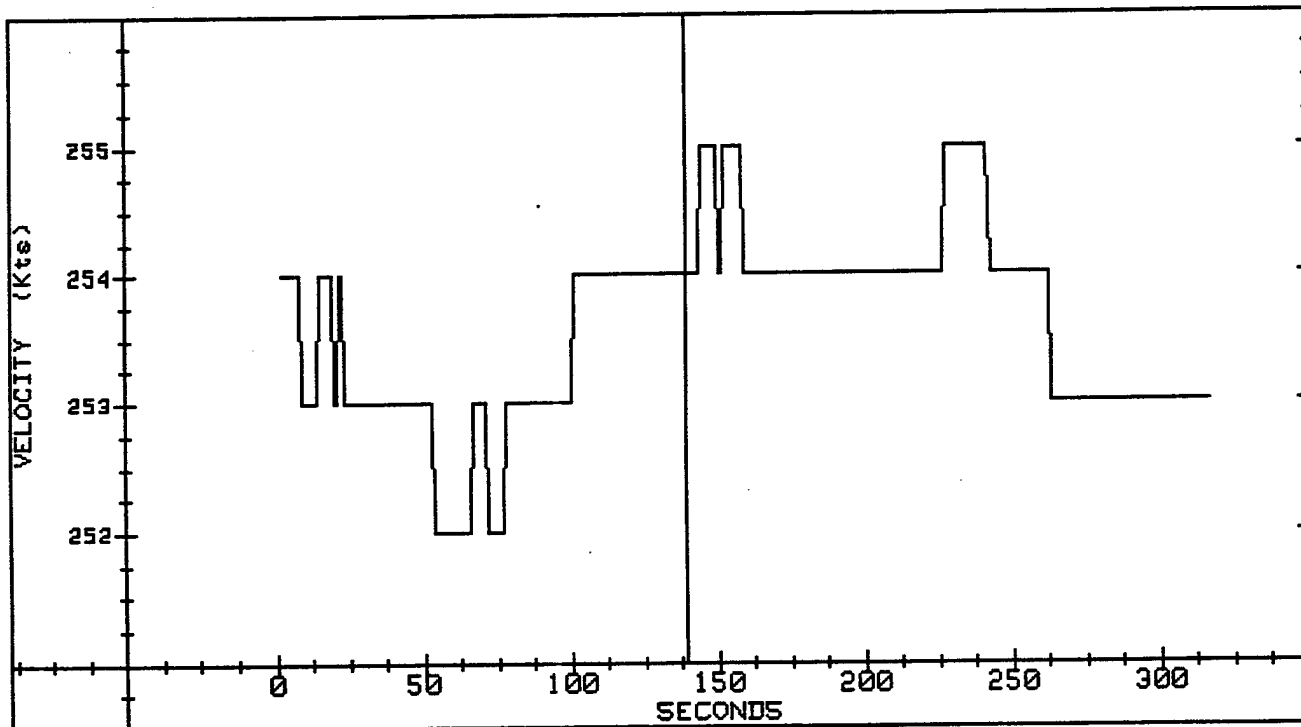
BARO ALTITUDE

DAY 178 TIME 2:19 PASS 26 m= 5845, sd= 3.07217



# INS GROUND SPEED

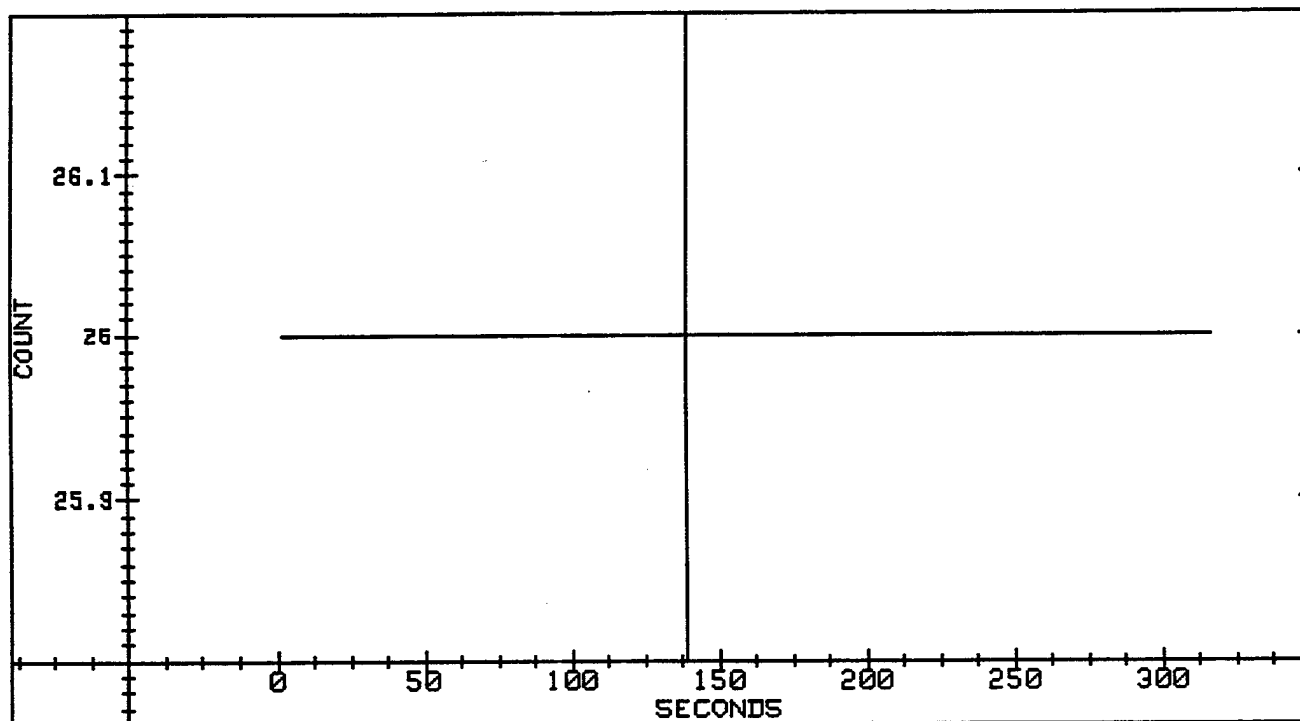
DAY 178 TIME 2:19 PASS 26 m= 253.8, sd= .630244





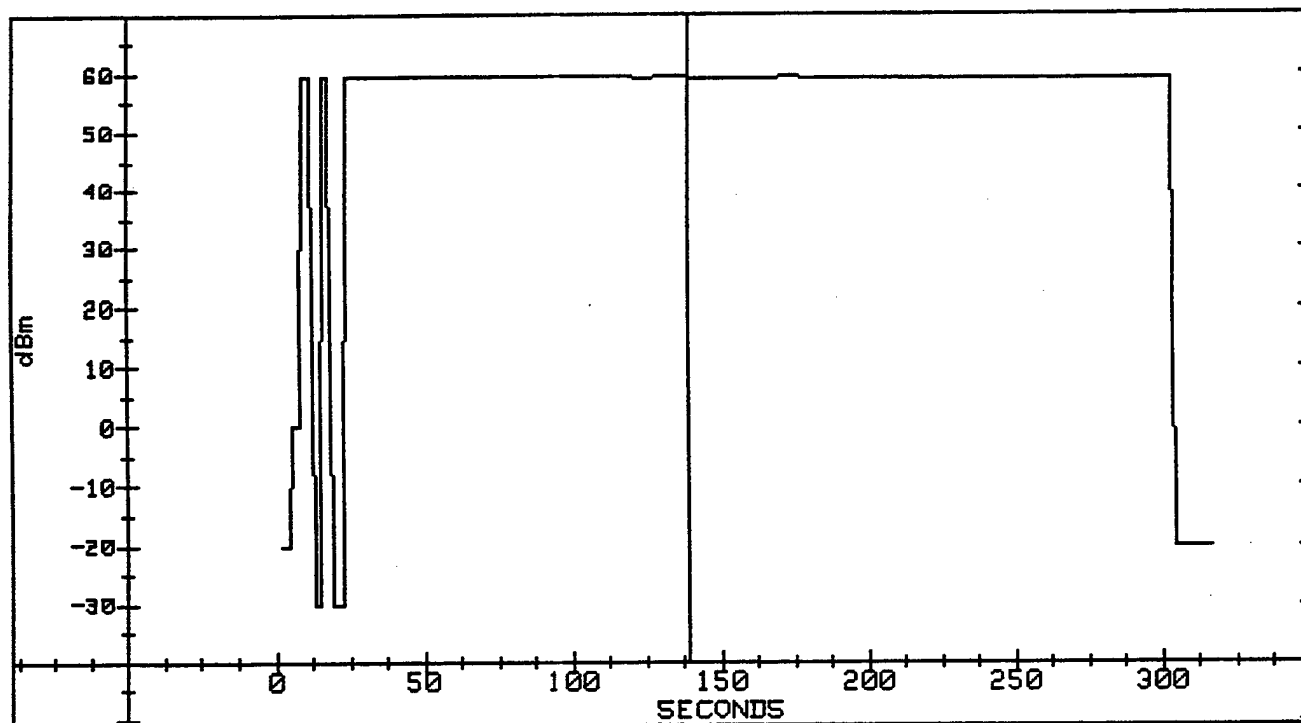
PASS NUMBER

DAY 178 TIME 2:19 PASS 26 m= 26. sd= 0



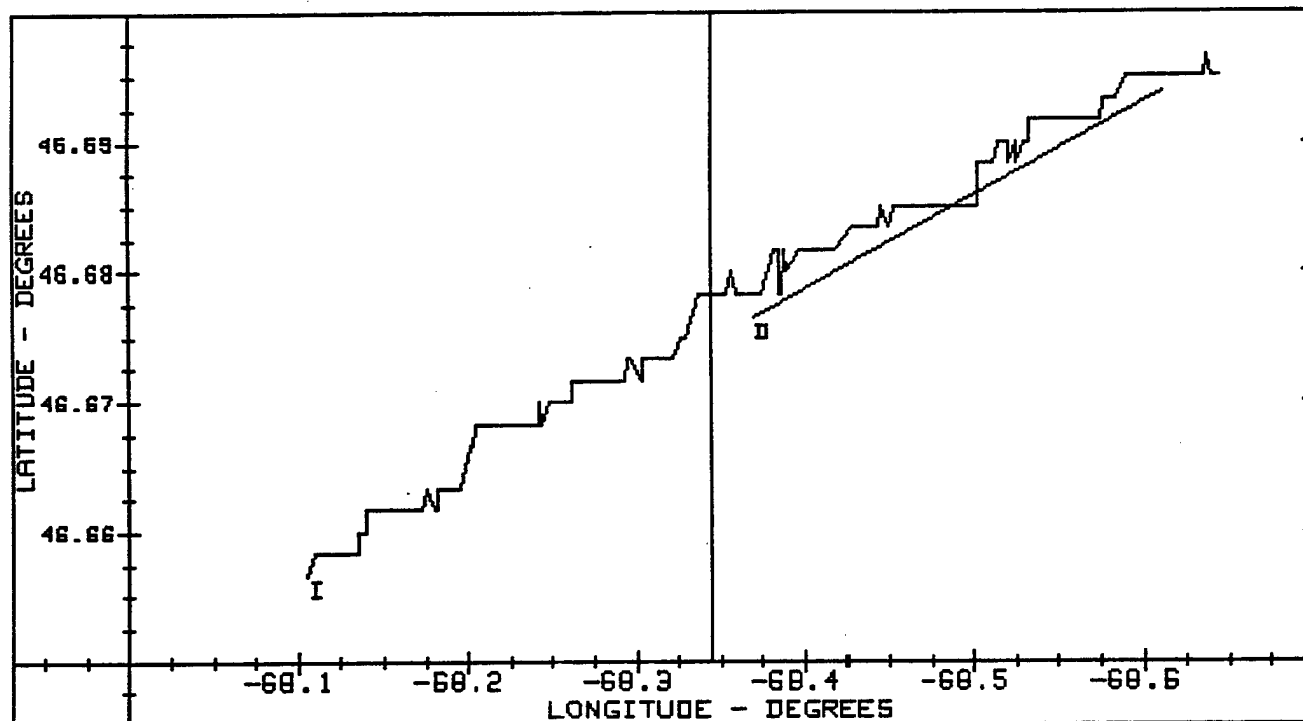
P Band Power

DAY 178 TIME 2:19 PASS 26 m= 52.81, sd= 21.5700



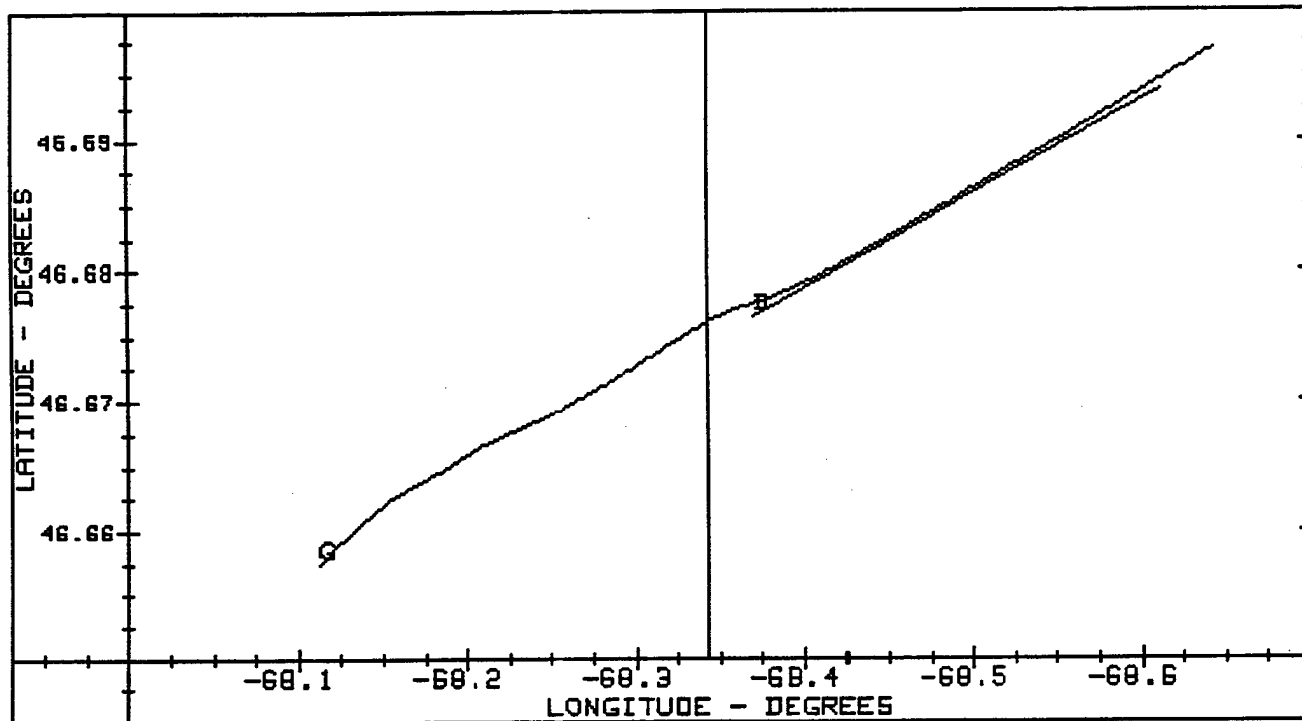
INS AIRCRAFT POSITION

DAY 170 TIME 2:19 PASS 26



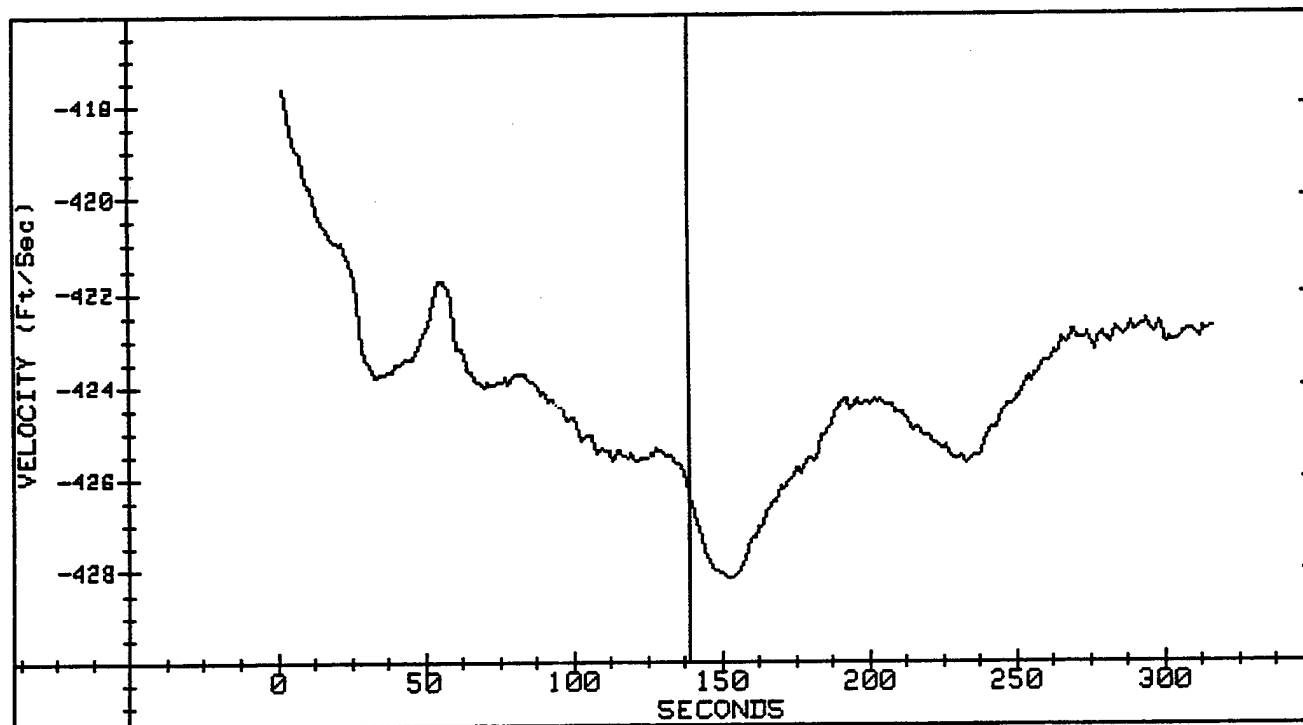
GPS AIRCRAFT POSITION

DAY 178 TIME 2:19 PASS 26



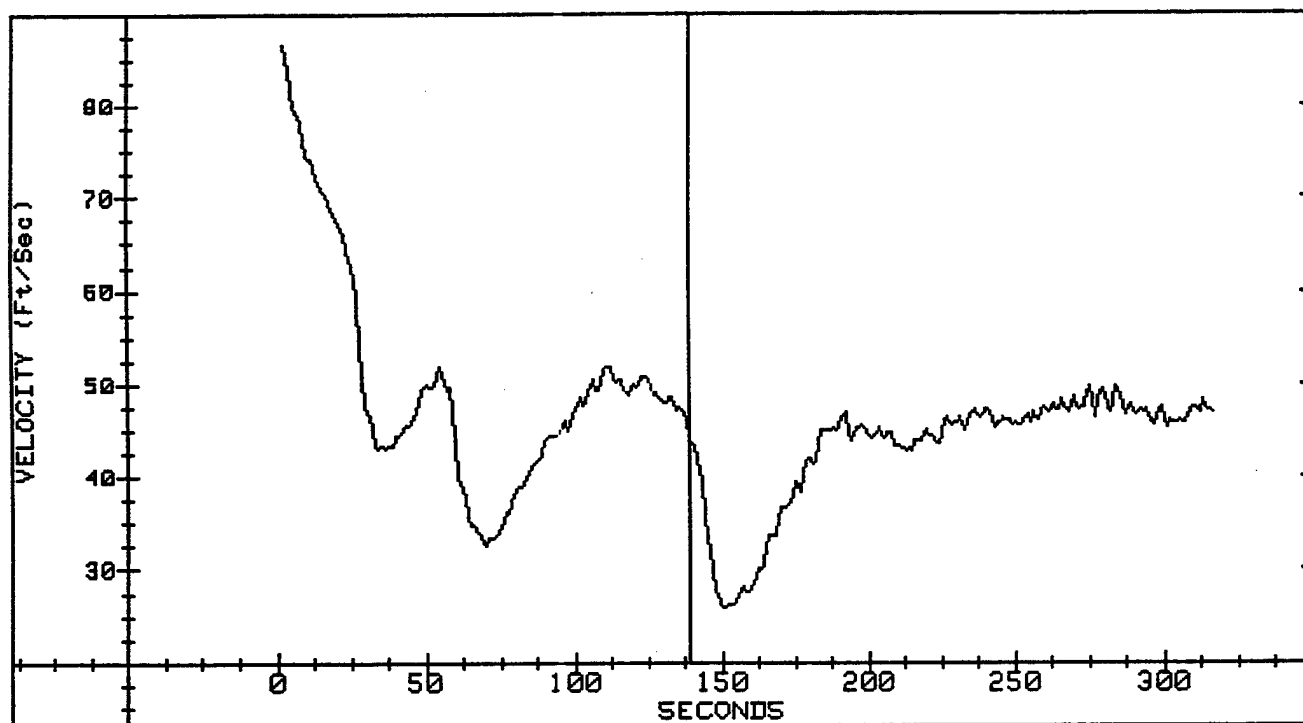
GPS V<sub>e</sub>

DAY 170 TIME 2:19 PASS 26 m= -424.4, sd= 1.33831



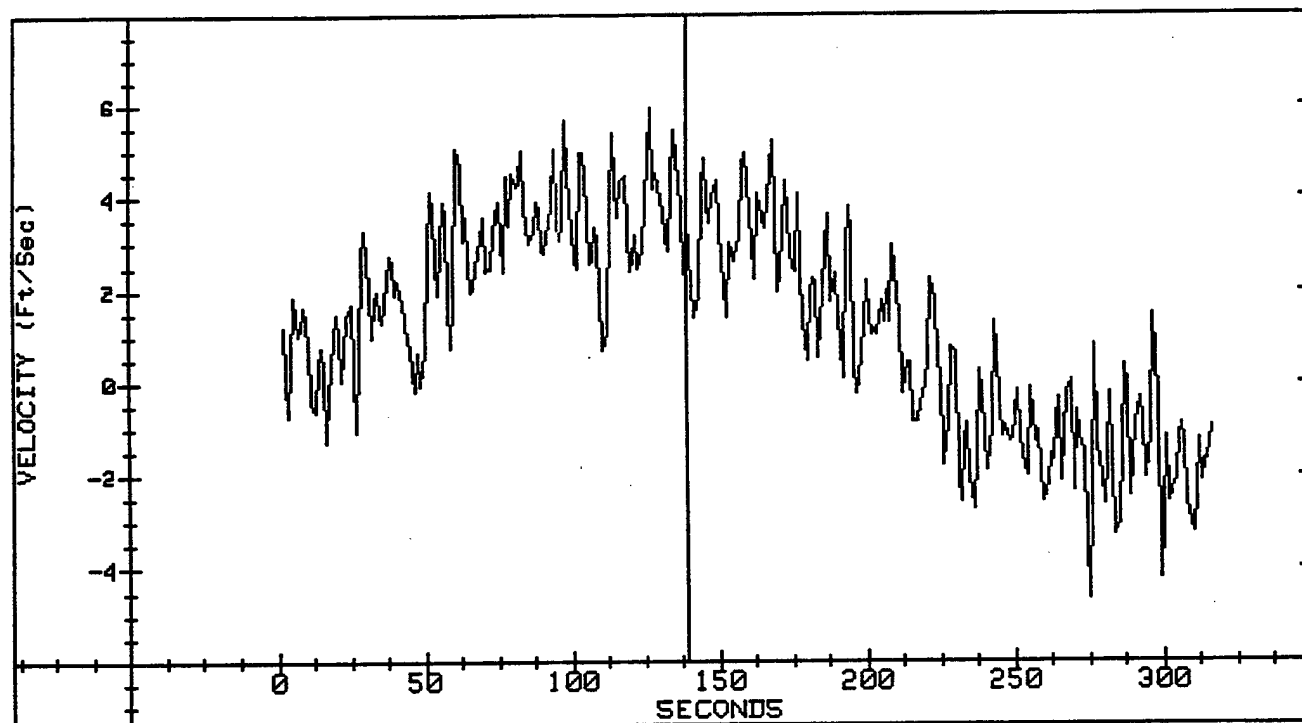
GPS Vn

DAY 178 TIME 2:19 PRSS 26 m= 44.21, sd= 4.08063



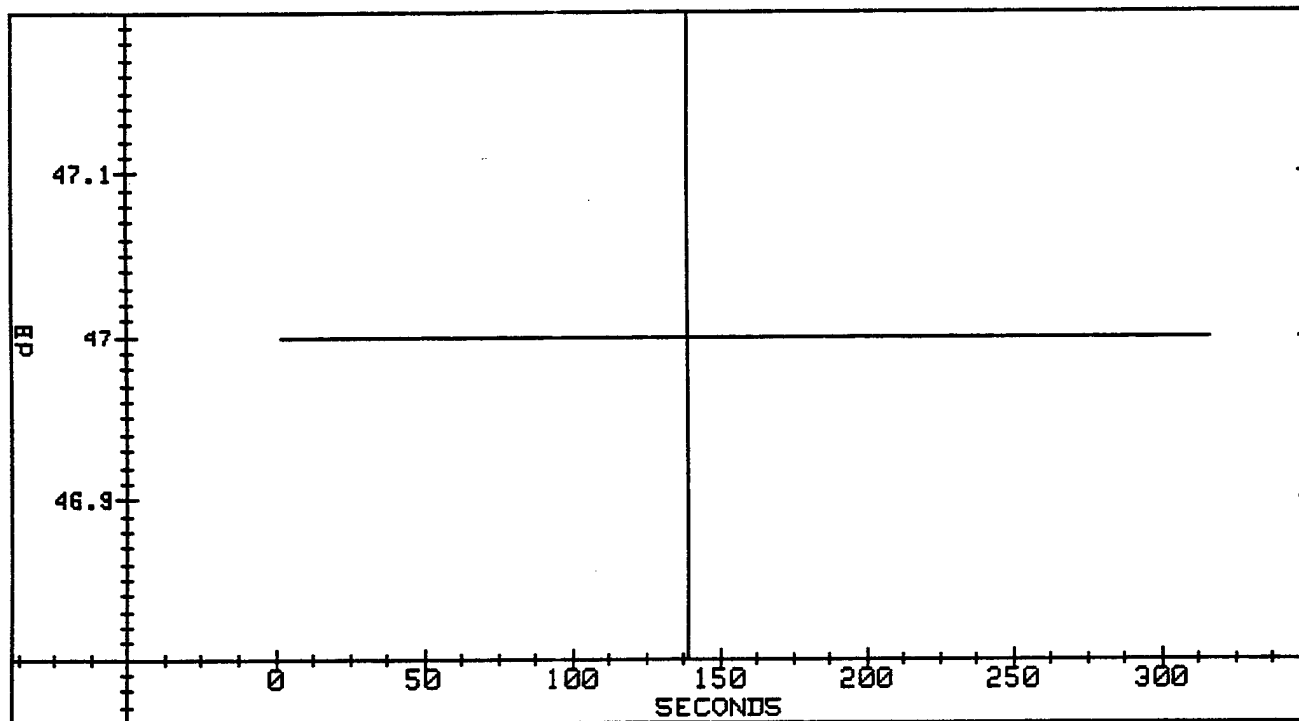
GPS Vv

DAY 178 TIME 2:19 PASS 26 m= .00734, sd= 2.10294



Ch1 RES Attenuation

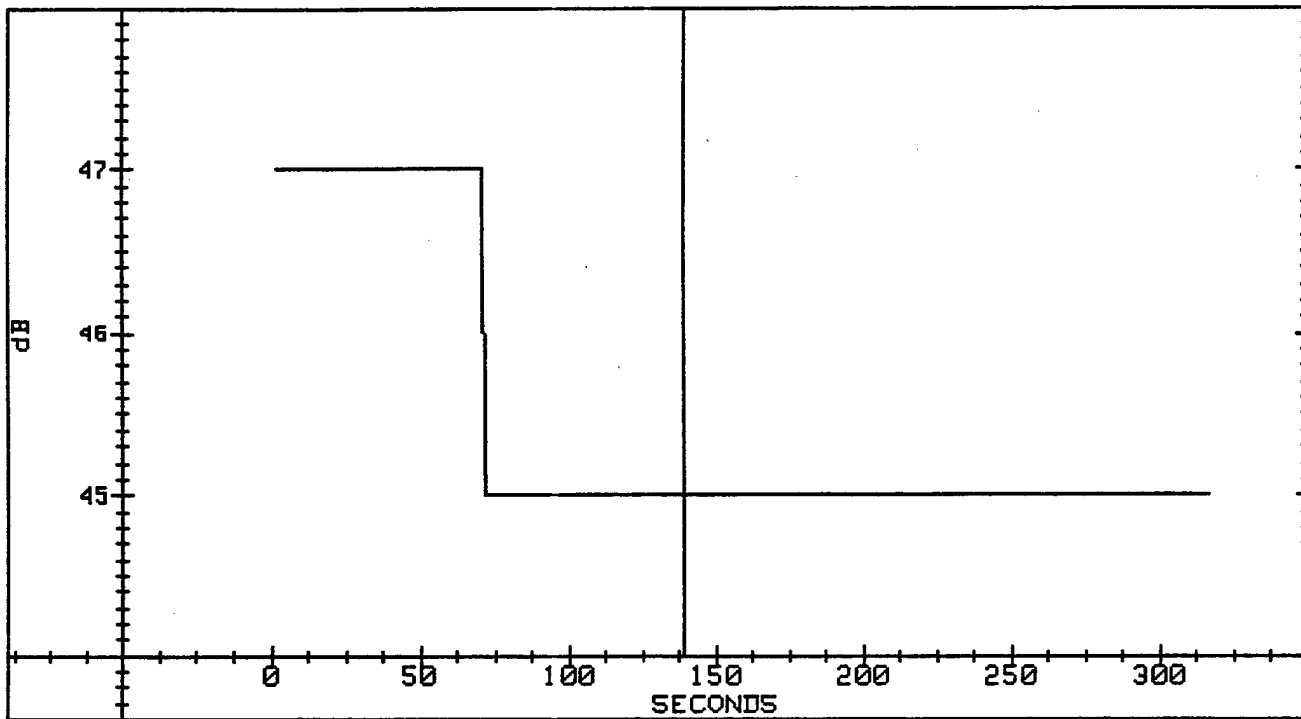
DAY 178 TIME 2:19 PASS 26 m= 47, sd= 0





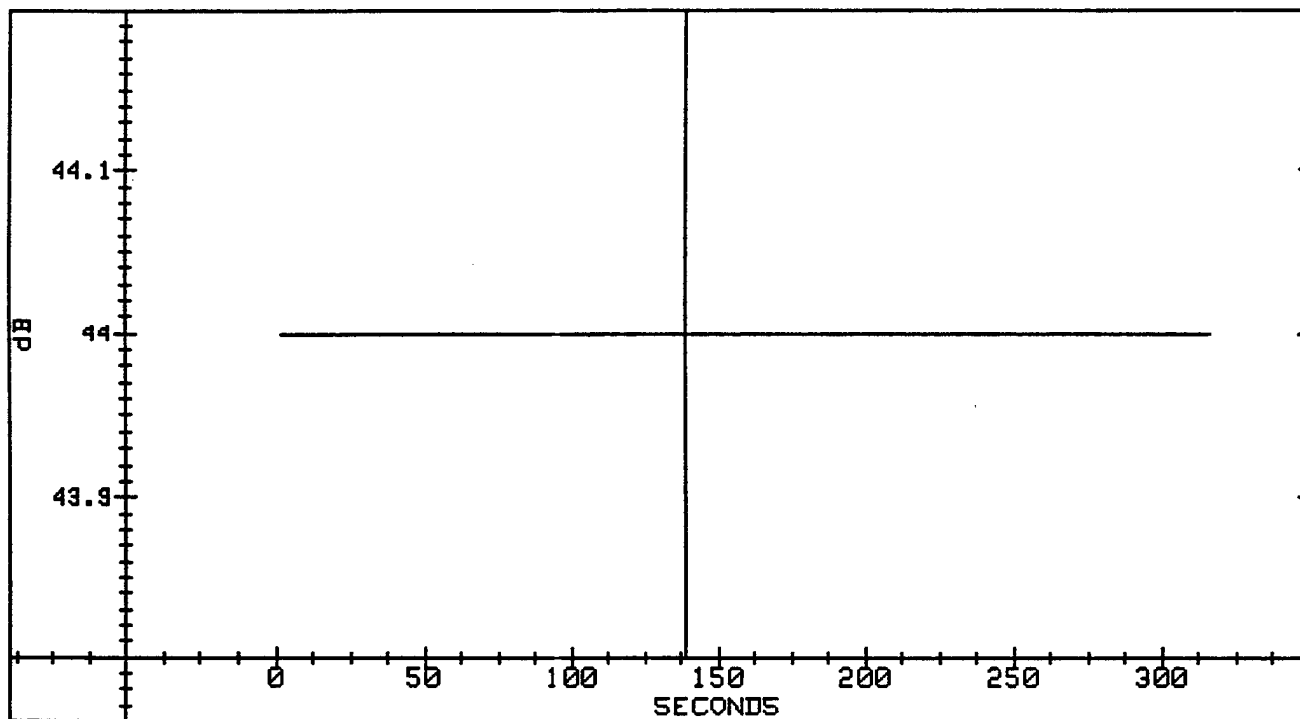
Ch2 RES Attenuation

DAY 170 TIME 2:19 PASS 26 m= 45, sd= 0



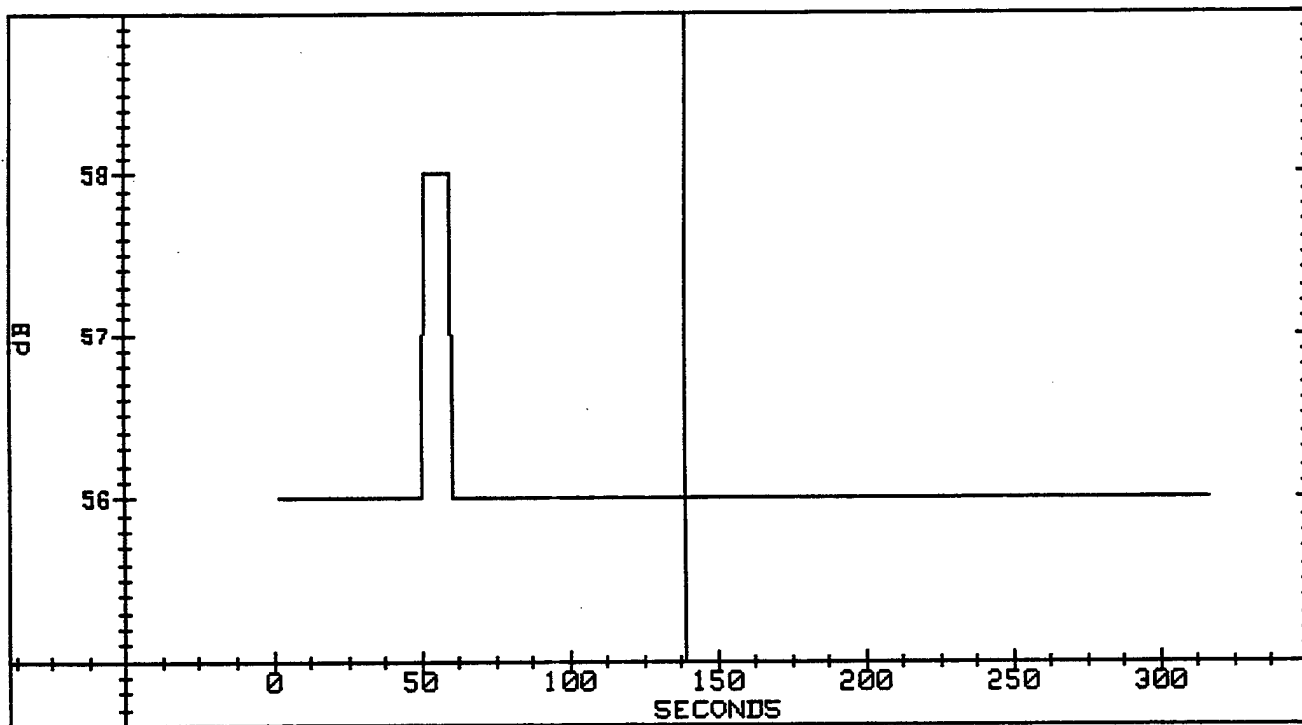
Ch3 RES Attenuation

DAY 170 TIME 2:19 PASS 26 m= 44, sd= 0



Ch4 RES Attenuation

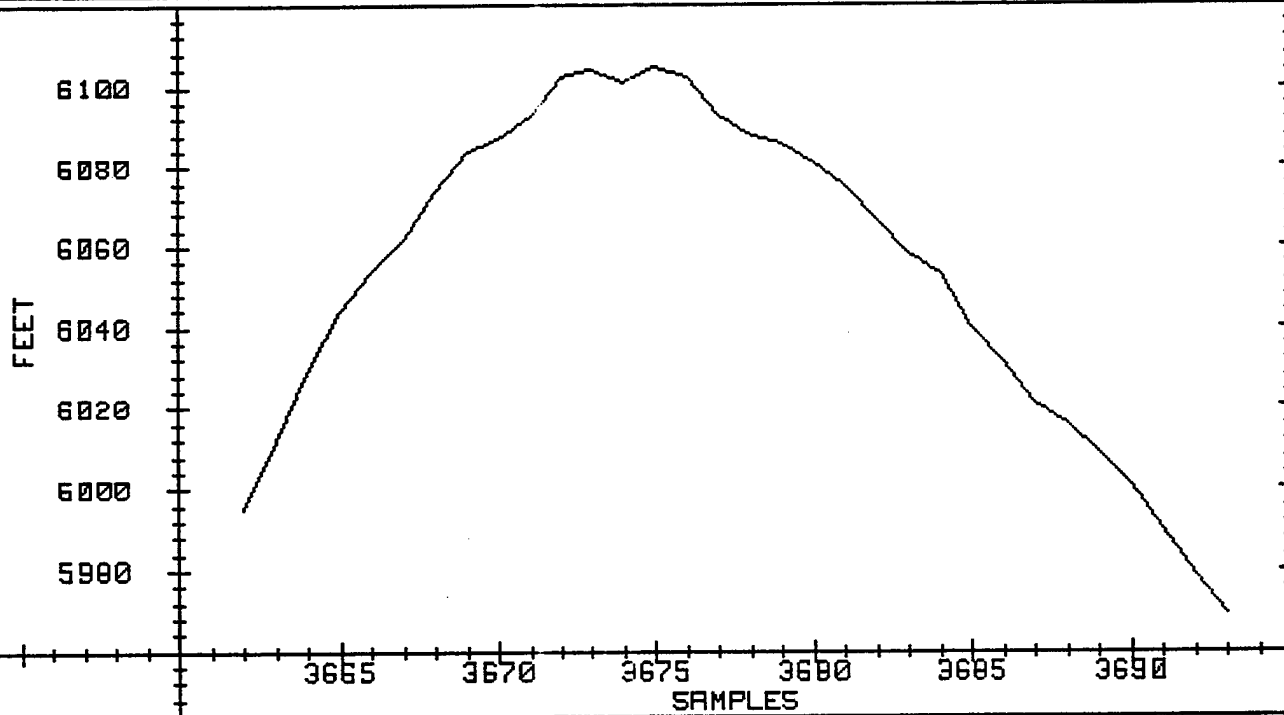
DAY 178 TIME 2:19 PASS 26 m= 56, sd= 0



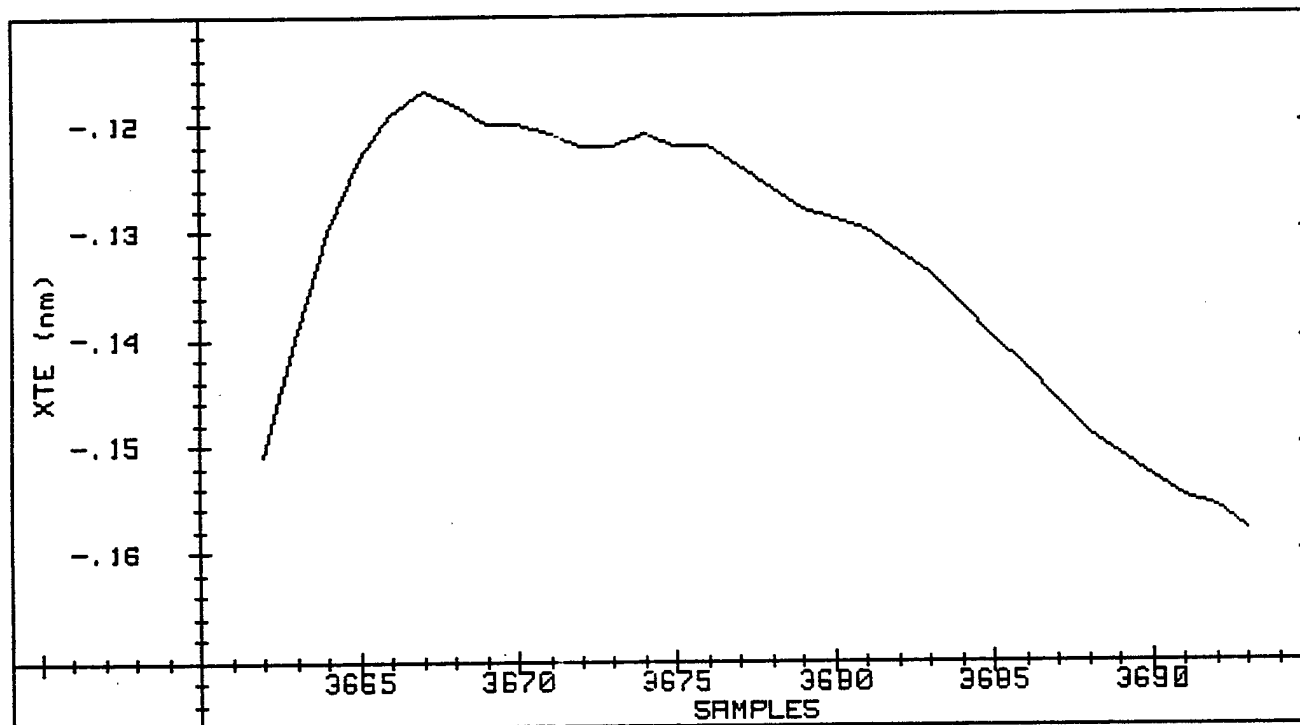
GPS ALTITUDE

MEAN= 6053.25      STANDARD DEVIATION= 40.2779  
DATE: June 26, 1995      PASS 26

OFF  
ON  
BRR



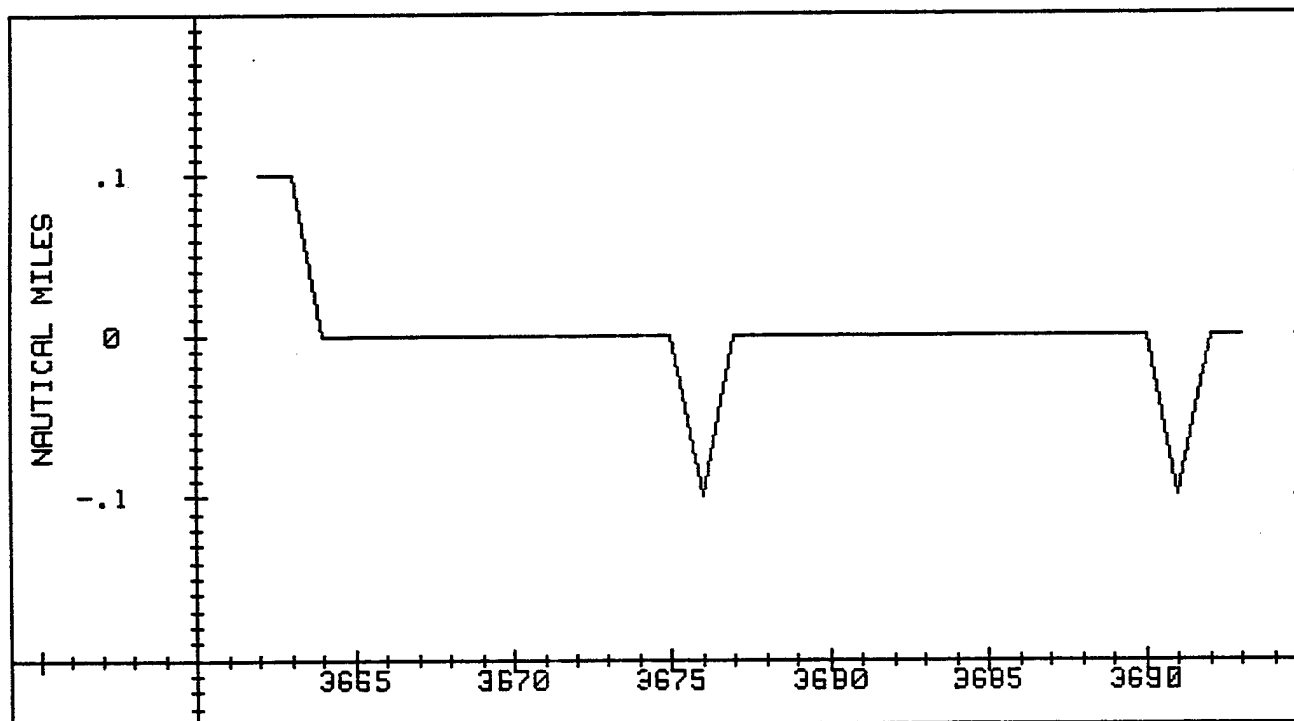
GPS Cross Track Error  
MEAN= -.133062 STANDARD DEVIATION= .0129782  
DATE: June 26, 1995 PASS 26



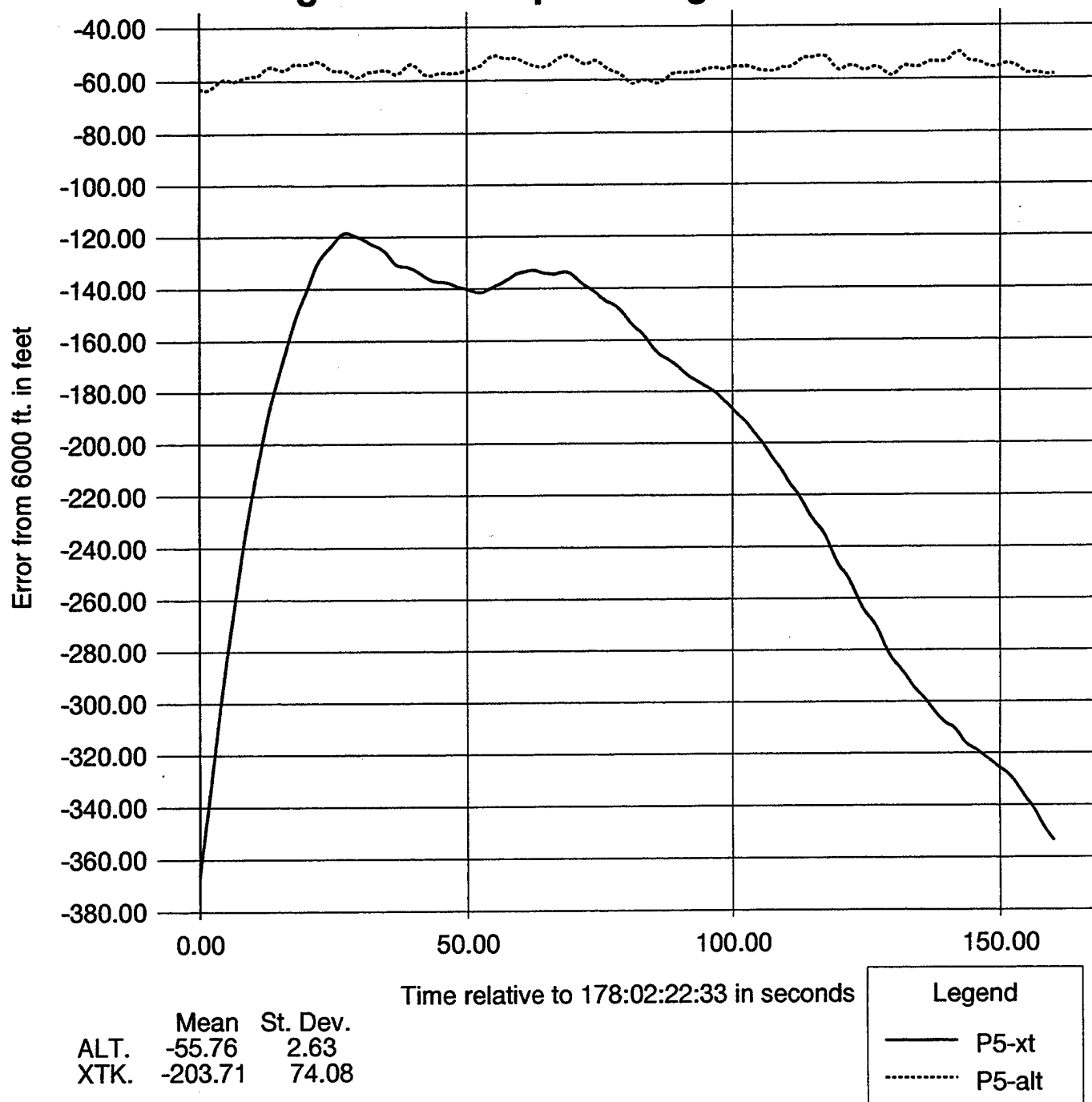
INS CROSS TRACK ERROR

MEAN= 0 STANDARD DEVIATION= .0353553

DATE: June 26, 1995 PASS 26



# Portage, ME - June 26, 1995 - Pass 26 - Xtk. and Alt. Errors Higher alt. and port are greater than zero



27 Jun 1995  
Tape: E1414

Post-line Data Sheet  
Line 2  
Mission: PORTAGE MAINE, DAY

Time: 178:02:35:33  
Pass 27  
Req.# 2

#### AIRCRAFT & CHANNEL DATA

Altitude			CH 1	CH 2	CH 3	CH 4
Desired:	13500 ft	Wave/Pol.:	X-HH	L-HH	C-HH	L-VV
Baro:	13315 ft s.d.=	3 Swath Ctr Ang:	40.0°	40.0°	40.0°	40.0°
Slt. rng:	19975 ft	Tgt Dep Ang:	40.0°	40.0°	40.0°	40.0°
Look:	Left	St rng (ft):	11915	11915	11915	11915
Depr Ang:	25.0°	Near Rng Dep:	90.0°	90.0°	90.0°	90.0°
Des. trk:	186.0°	Far Rng Dep:	28.4°	28.4°	28.4°	28.4°
Start Sq:	-90.0°	Atten (dB):	18.0	36.0	20.0	33.0
End Sq:	-90.0°	RMS Video (%FS)	10.3	23.0	25.3	32.0

#### WAYPOINTS

Line_up:	N 47:01.89	W 68:31.61	Main Target:	GP
Start:	N 46:49.96	W 68:33.44	Mocomp Point:	
End:	N 46:40.02	W 68:34.96	Lat:	N 46:44.73
			Long:	W 68:30.56
From:	N 63:14.50	W 64:46.38	Tgt Trk:	0.0 Tgt Vel: 0.0
To:	N 30:07.76	W 70:33.17	Alt:	660.0 ft

#### RADAR PARAMETERS - for XLC

RTP Channel:	1	Filter damping is Hi	-> 10 sec
Resolution:	High	PRF Factor is FAST	(262.5 kts) -
Swath width:	Single	Ave Gndspd:	Real -> 255.0 kts
RMS Time Constant:	2^7	Mocomp On	
Position Reference:	ON	GPS Vel/Pos Reference	
Atten. Tracking:	OFF	Adj Gnd Scene:	5000.0 ft
Range Gate Delta:	0.0 ft	Range Tracking is	OFF
Azimuth Presum Rate:	Presum6	Clutterlock Reference:	OFF

Ave Ref Vel -> 20.1 fps (s.d.= 2.3)  
Ave Fil Vel -> 22.9 fps (s.d.= 2.1)

NML XMIT PWR	ANT BIAS	Tape Footage	Drive no.
X: -31.7	Elevation:	0.0°	
L: -31.4	Azimuth:	0.0°	Starting: 1475 ft (2)
C: -37.4	Pitch:	0.0°	Ending: 0 ft (2)
P: -70.0			

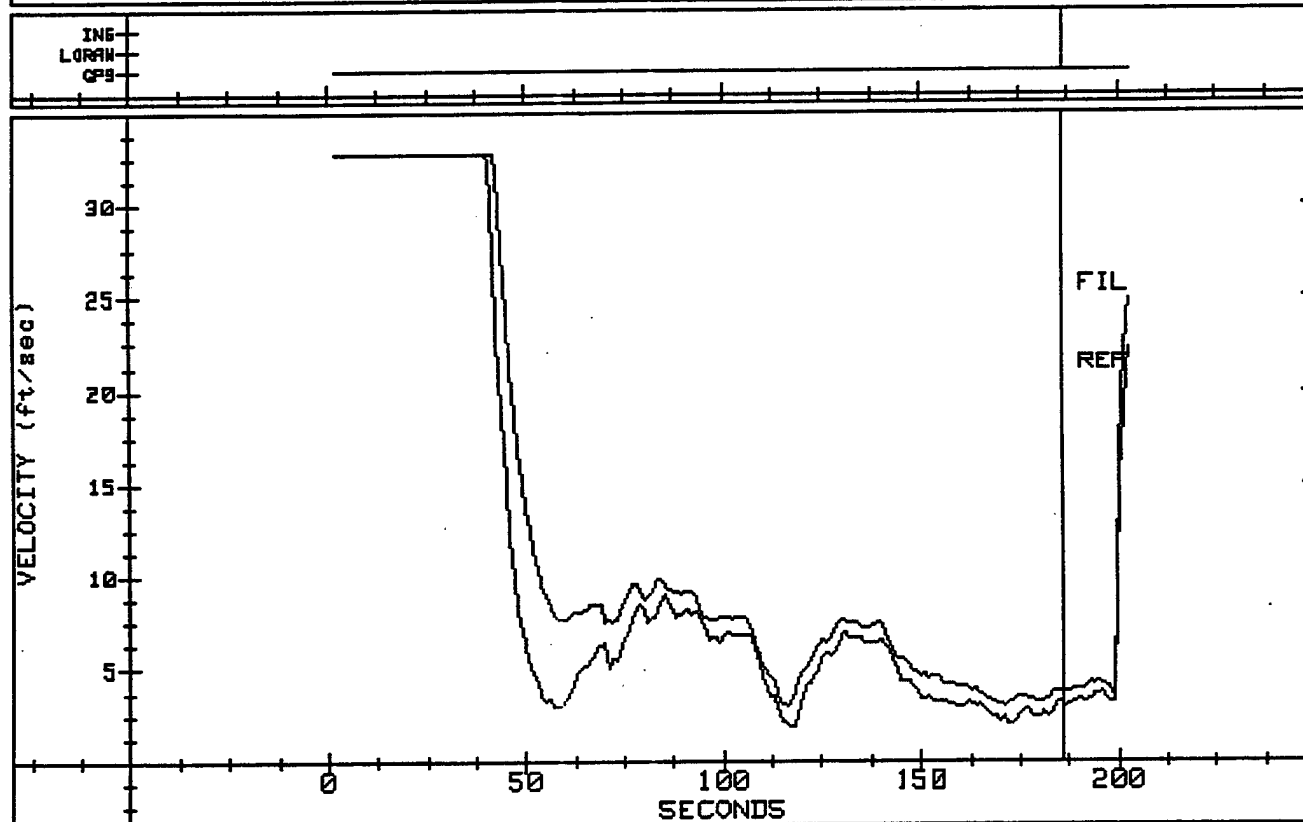
Vel Bias	CAL Atten	LINE Map Time (UCT)
X: 1035.0	X: 63.8 dB	Start: 02:35:33
Y: -433.0	L: 63.8 dB	End: 02:35:35
Z: 6697.0	C: 63.8 dB	

#### Mocomp Counters

Start:	1554630	0017B8C6h	CPA (UCT):	00:00:00
End:	1522549	00173B75h	Alt:	0 ft (GPS)
			Lat:	N 0:00: 0
			Lon:	E 0:00: 0

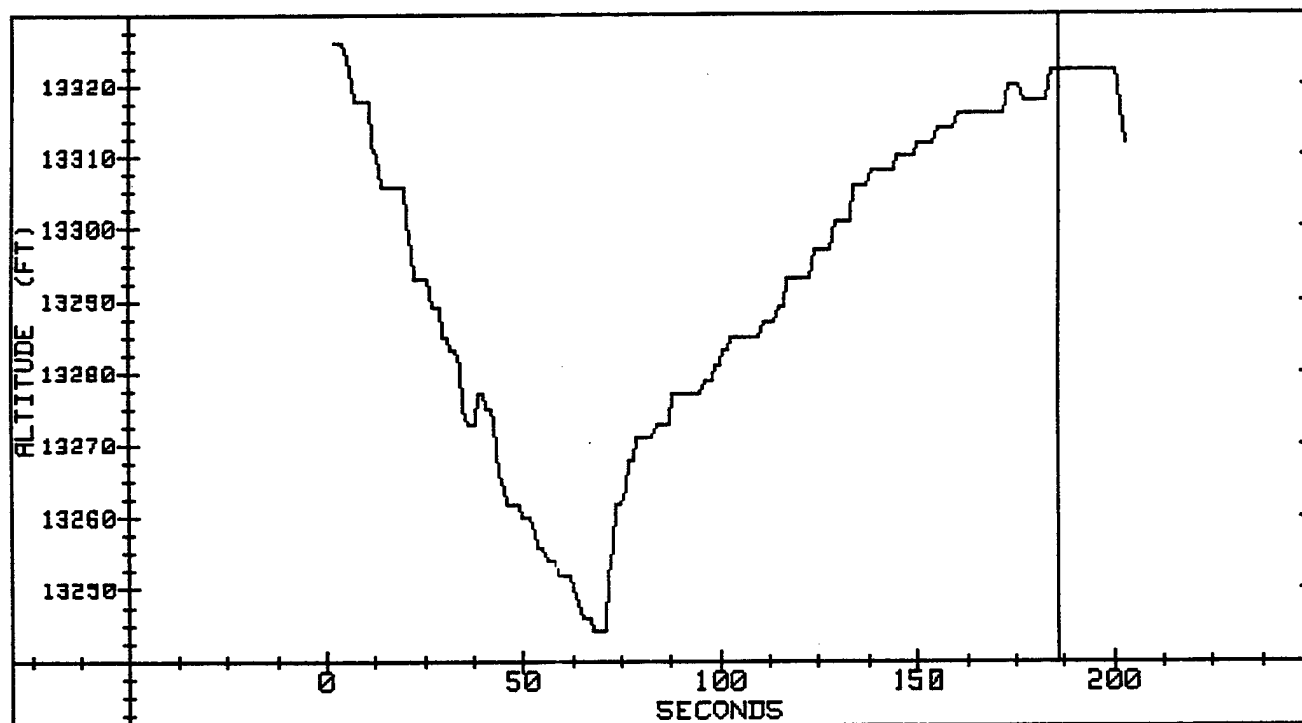


FILTERED vs. REF. VELOCITY  
DAY 178 TIME 2:32 PASS 27



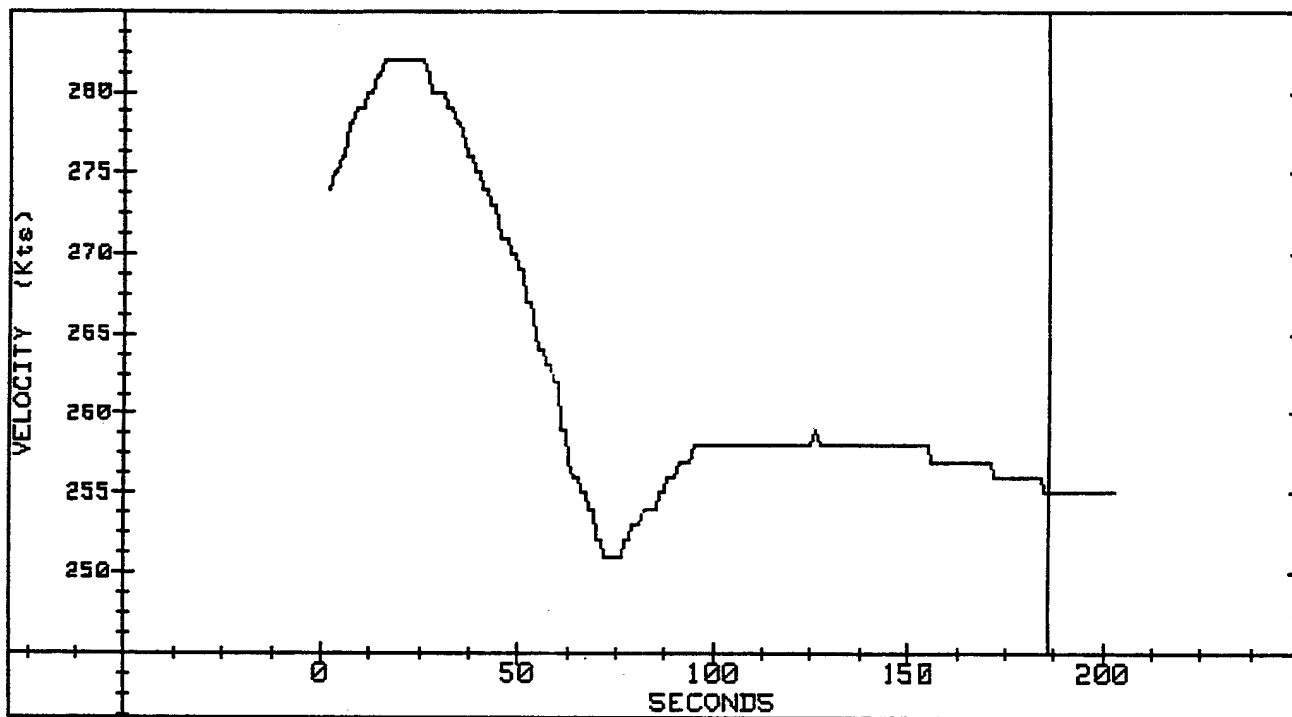
# BARO ALTITUDE

DRY 178 TIME 2:32 PASS 27 m= 13320. sd= 3.39935



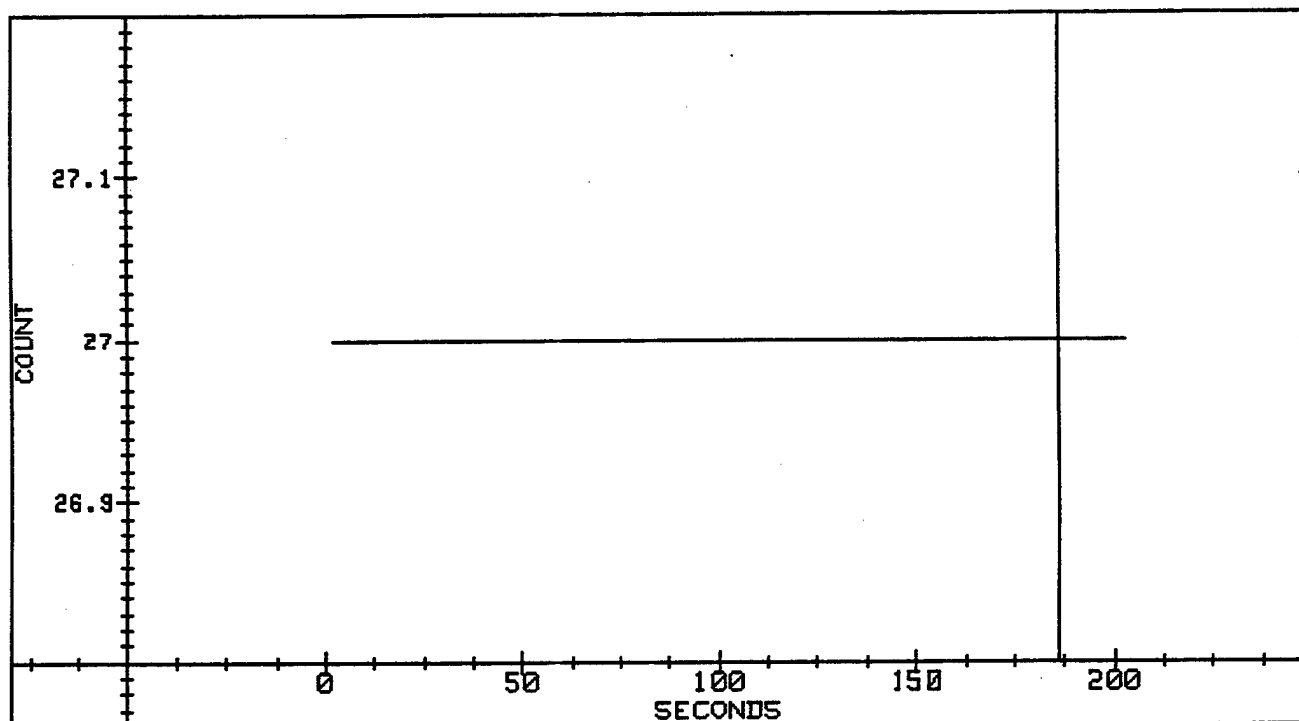
INS GROUND SPEED

DAY 178 TIME 2:32 PASS 27 m= 255, sd= 0



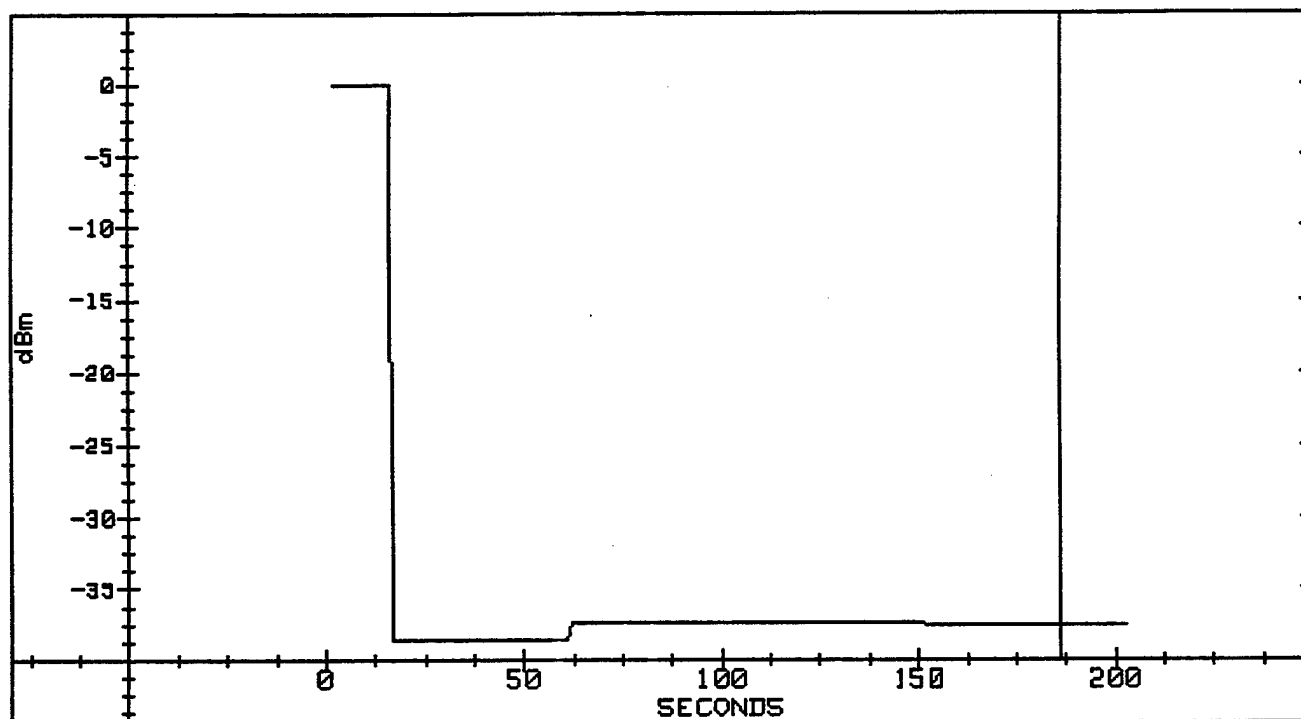
# PASS NUMBER

DAY 170 TIME 2:32 PASS 27 m= 27, sd= 0



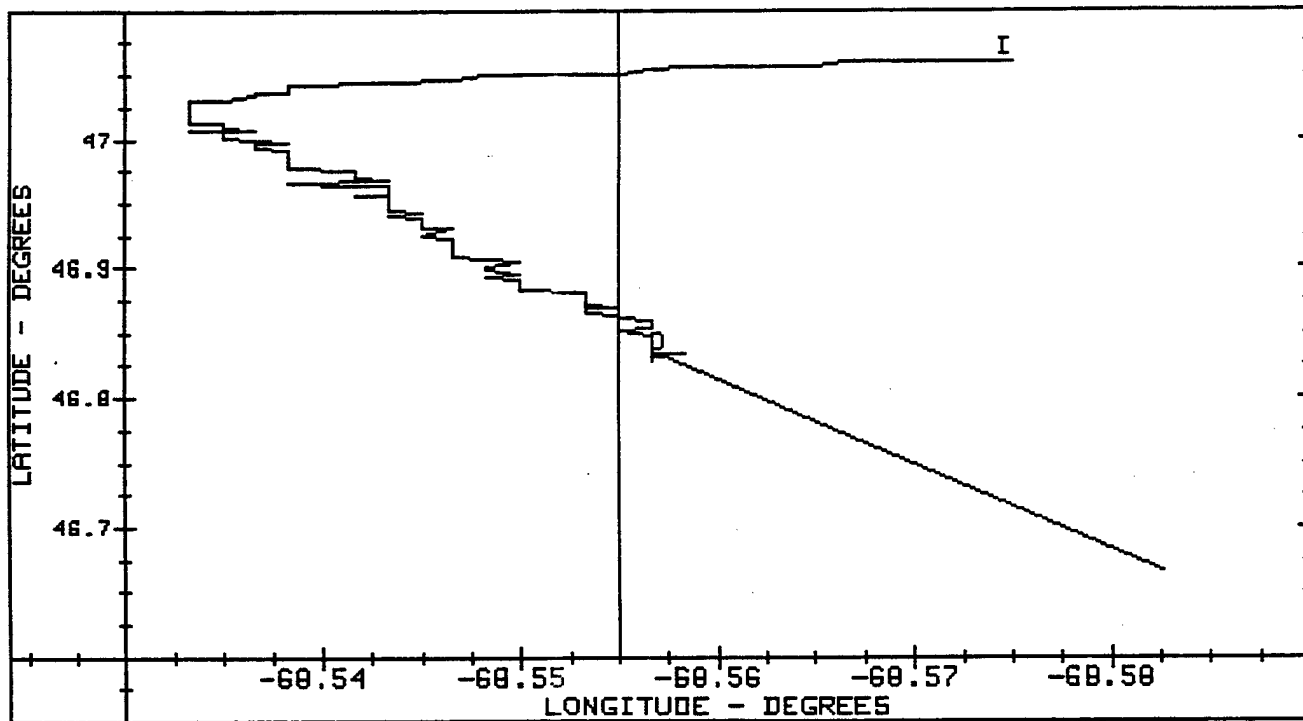
C Band Power

DAY 170 TIME 2:32 PASS 27 m= -37.5, sd= 0



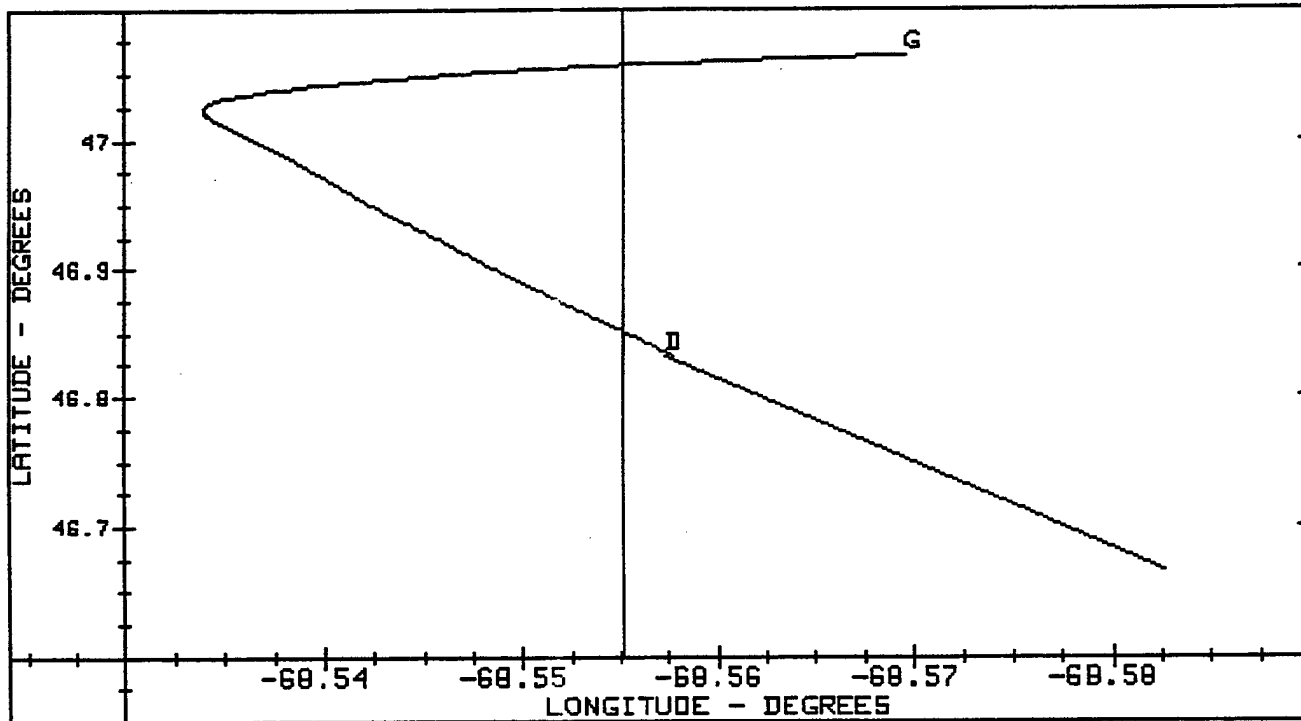
INS AIRCRAFT POSITION

DAY 178 TIME 2:32 PASS 27



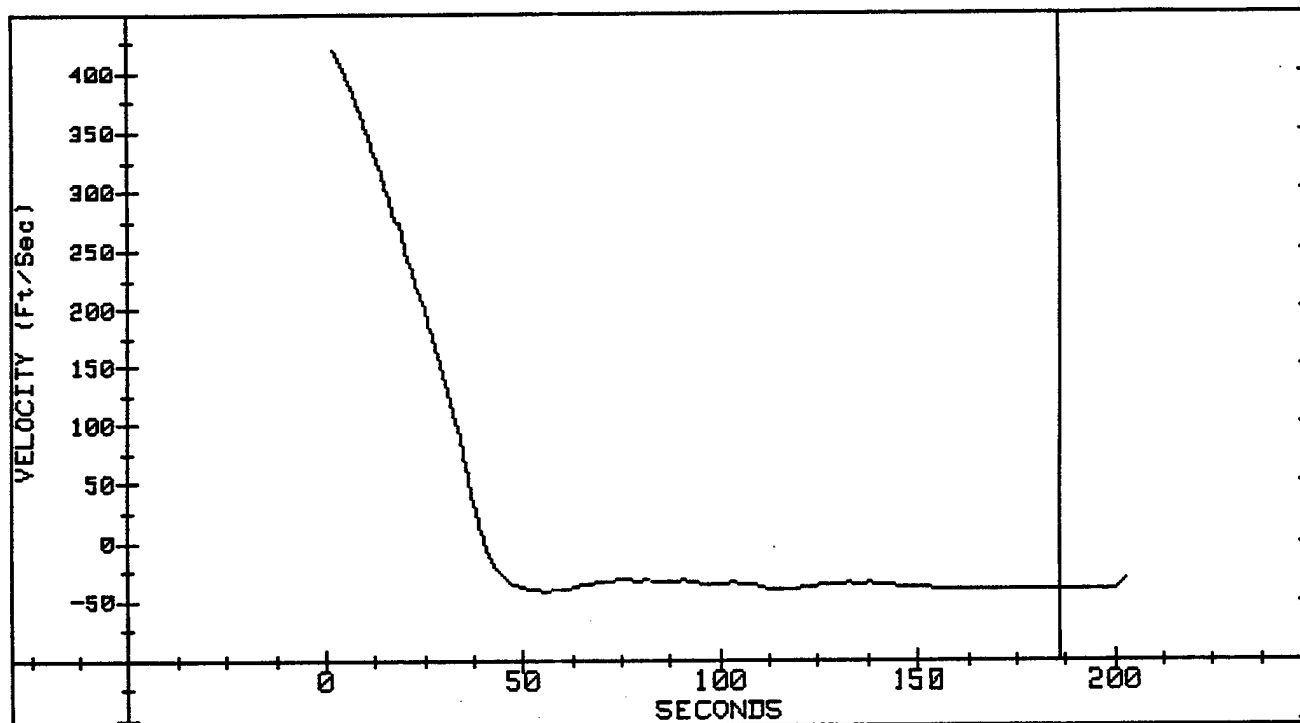
GPS AIRCRAFT POSITION

DAY 178 TIME 2:32 PASS 27



GPS V<sub>e</sub>

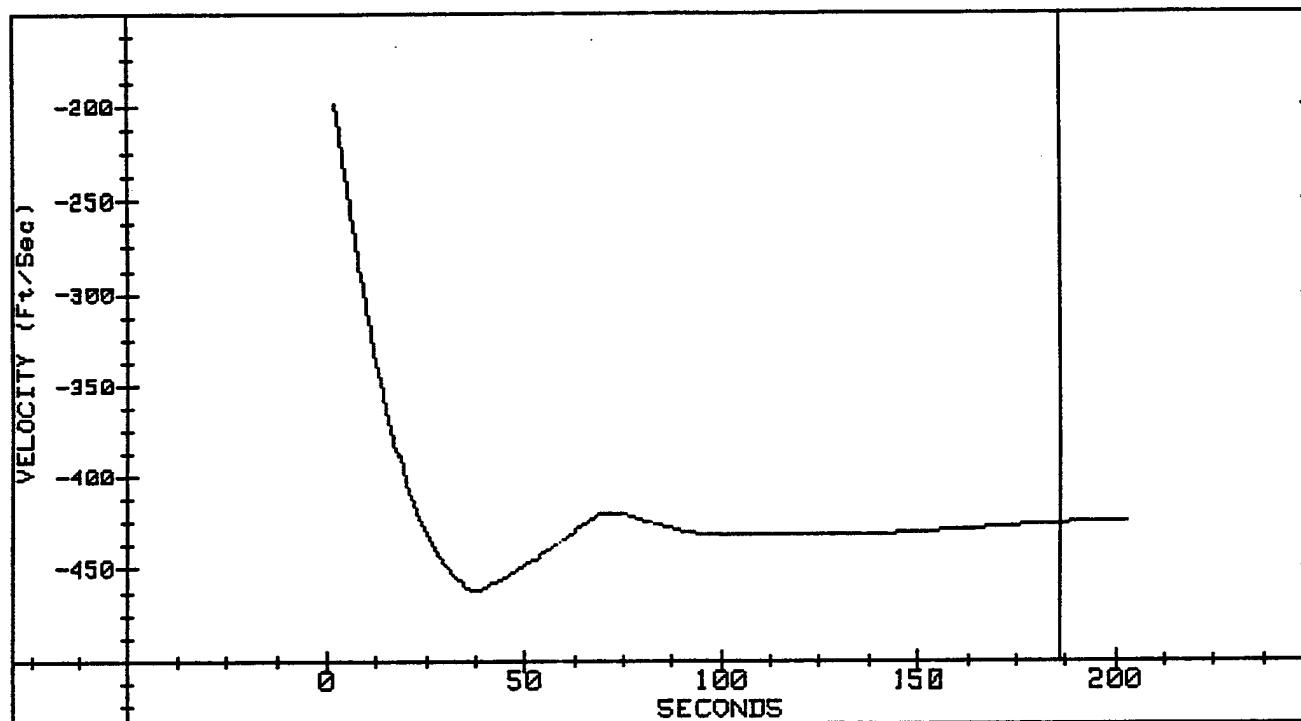
DAY 178 TIME 2:32 PASS 27 m= -34.68, sd= 2.45537





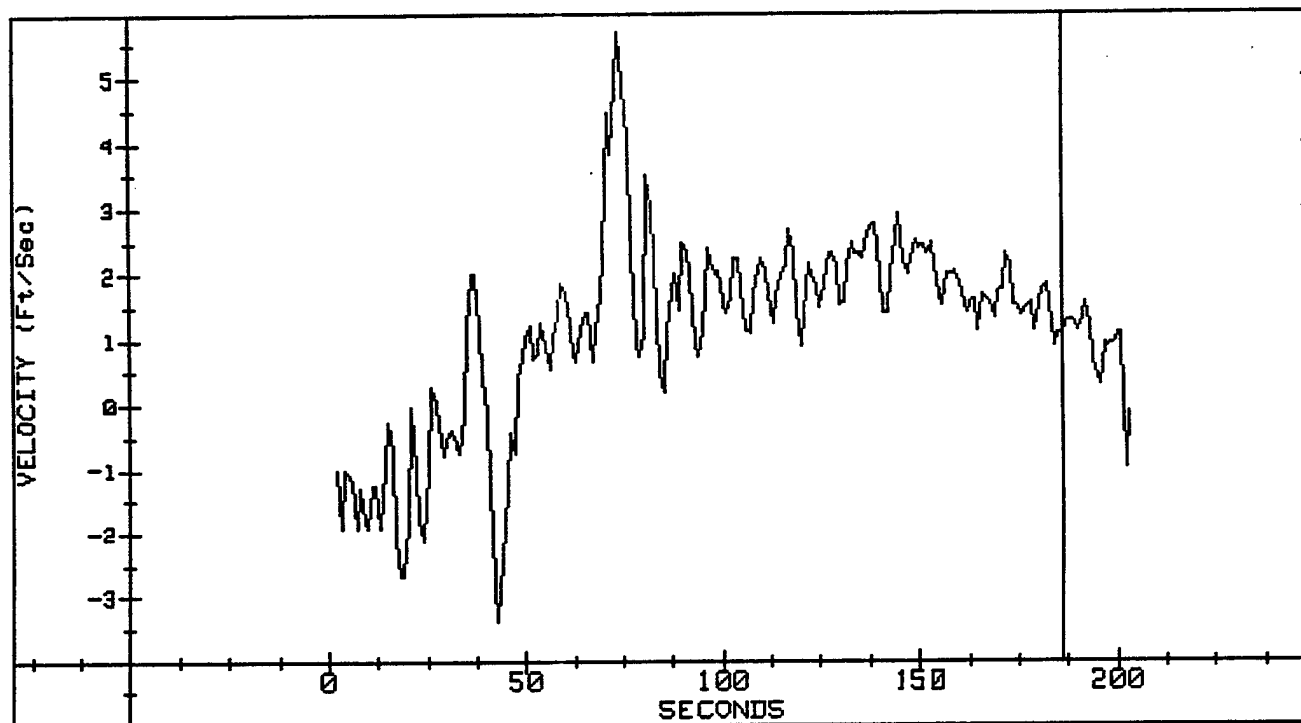
GPS Vn

DAY 178 TIME 2:32 PASS 27 m= -424.3, sd= .140529



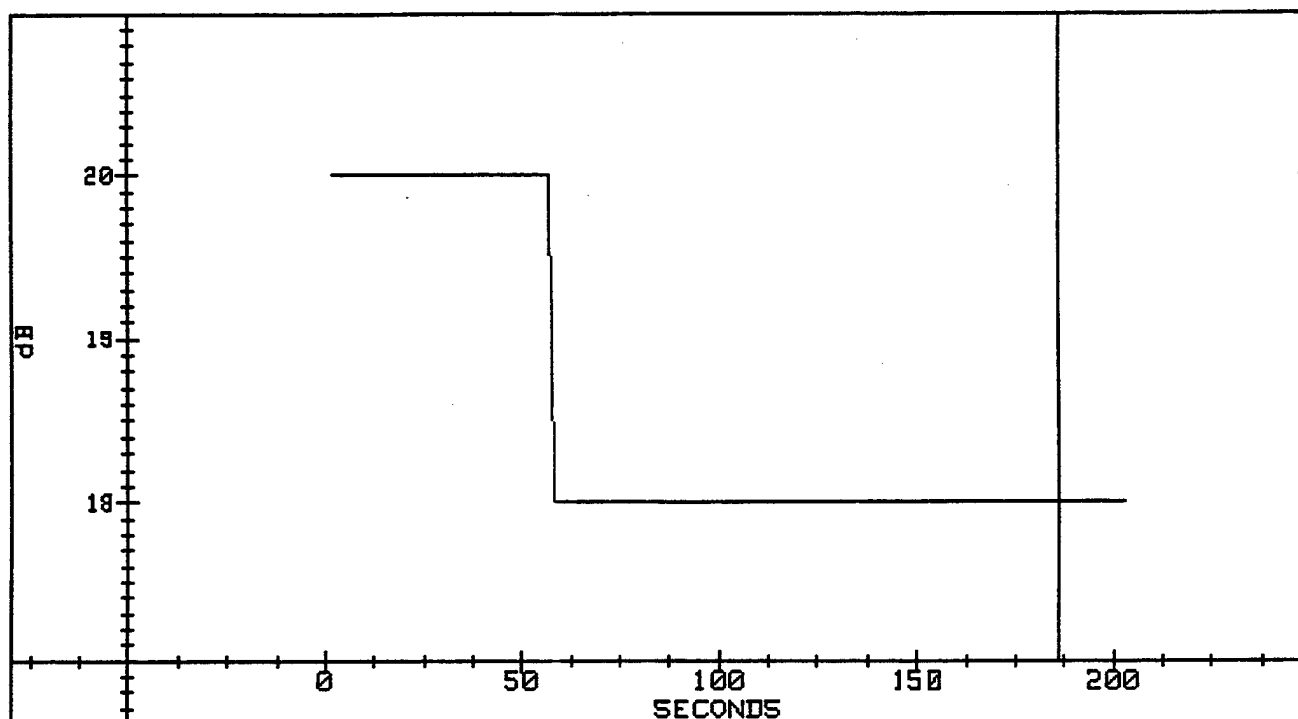
GPS Vv

DAY 178 TIME 2:32 PASS 27 m= .01042, sd= .045220



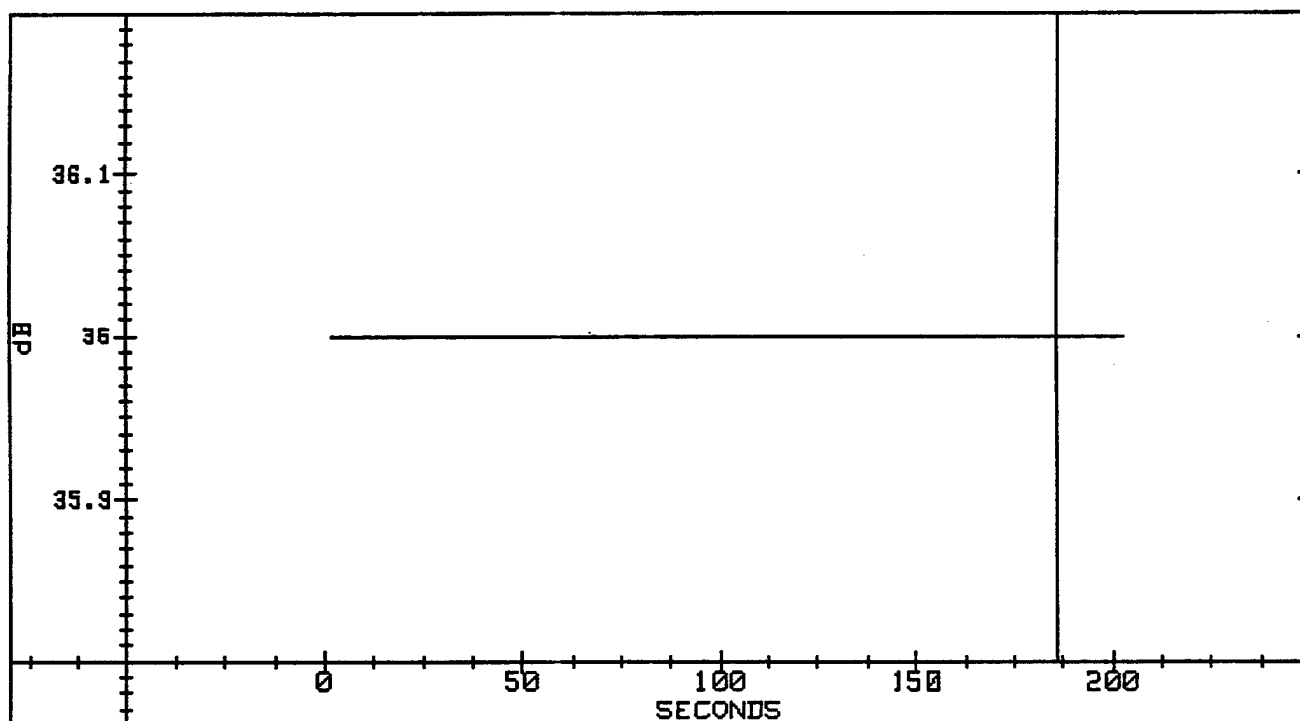
Ch1 RES Attenuation

DAY 178 TIME 2:32 PASS 27 m= 18, sd= 0



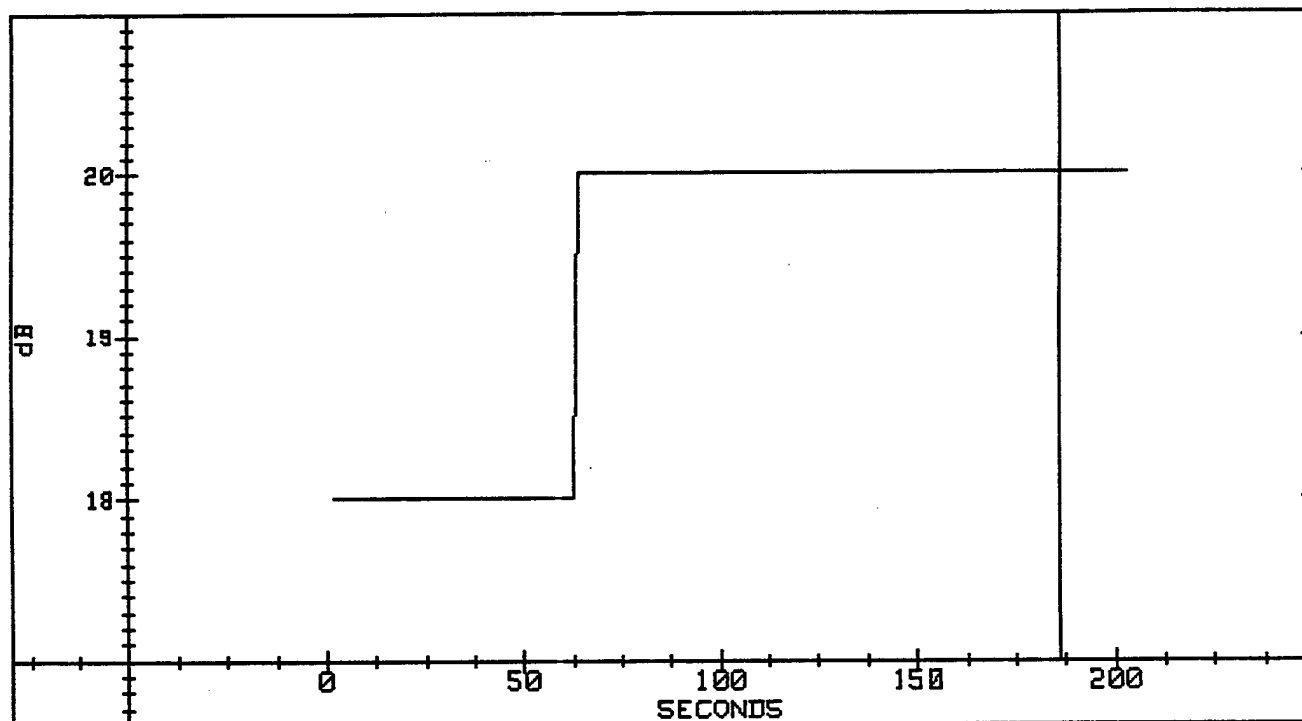
Ch2 RES Attenuation

DAY 178 TIME 2:32 PASS 27 m= 36, sd= 0



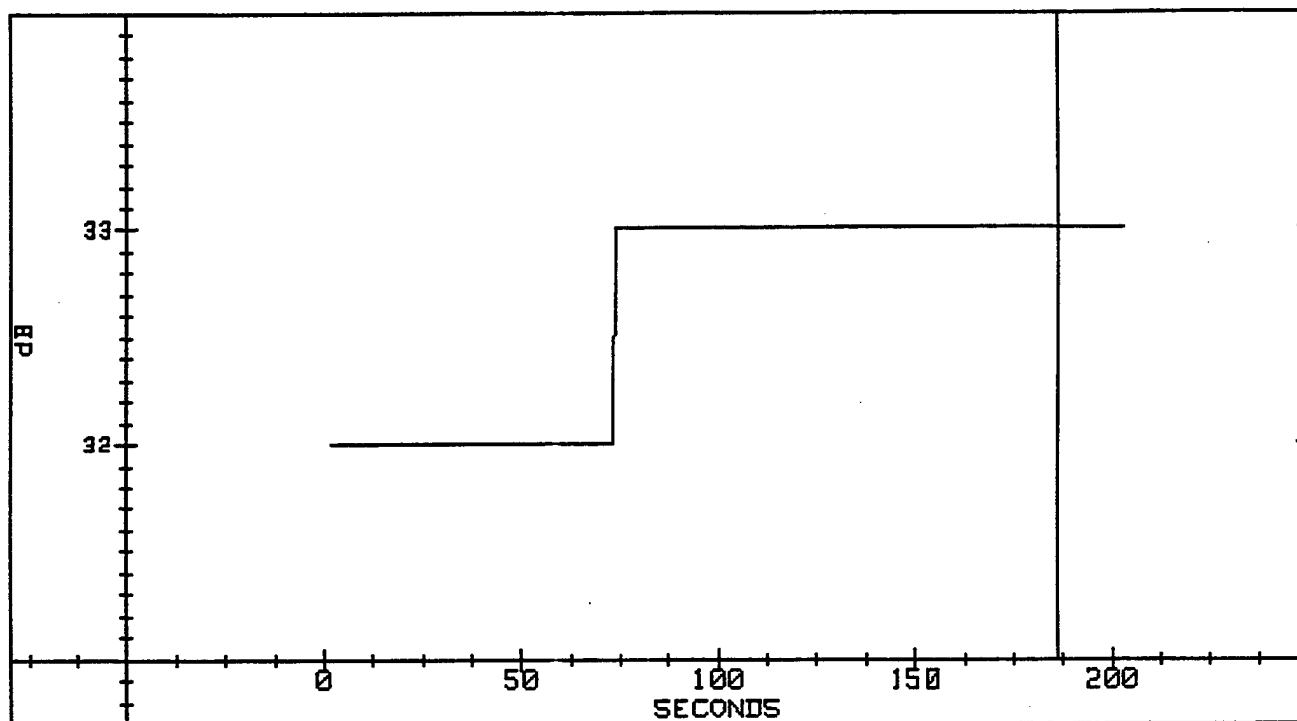
Ch3 RES Attenuation

DAY 178 TIME 2:32 PASS 27 m= 20, sd= 0

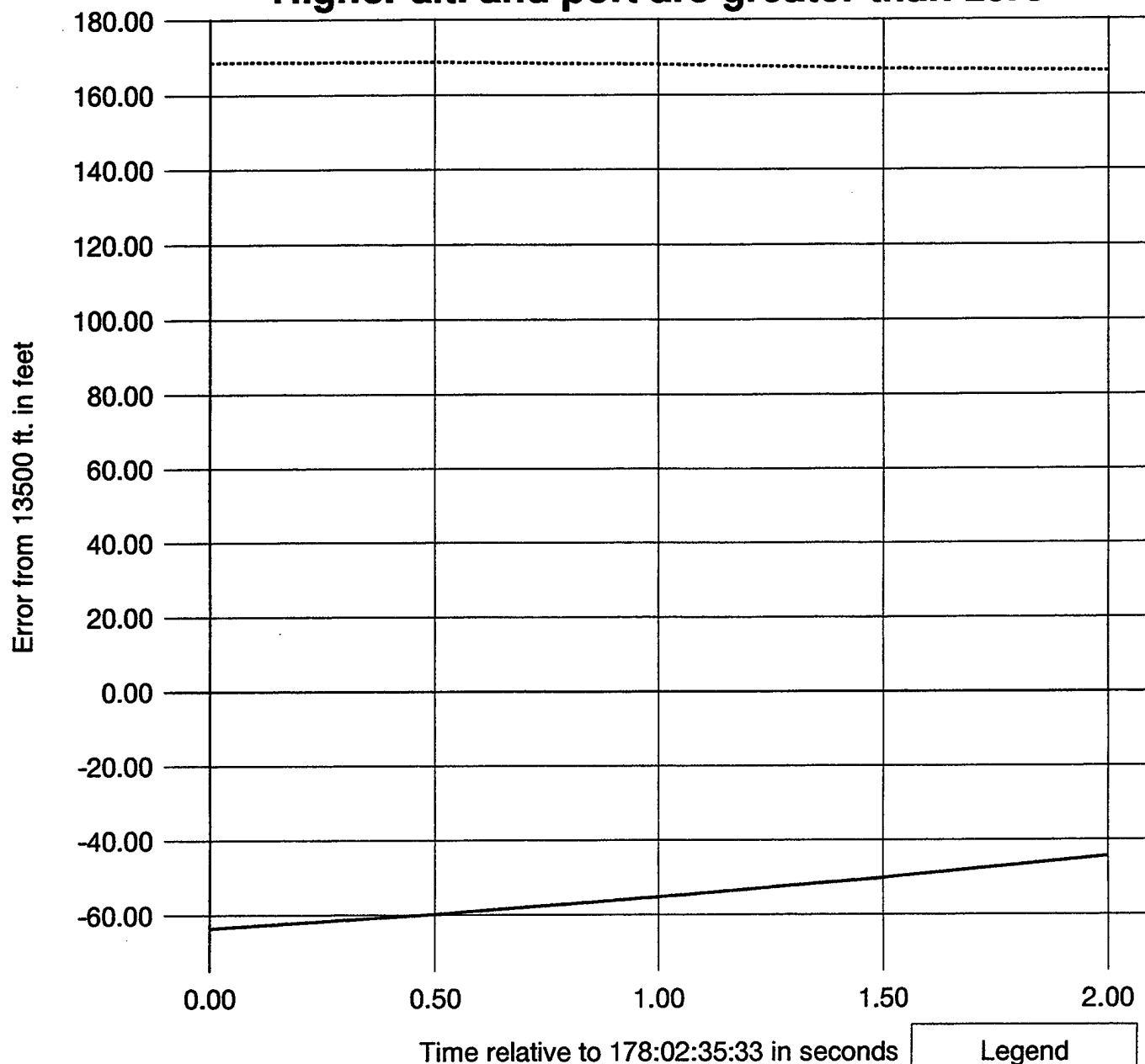


Ch4 RES Attenuation

DAY 170 TIME 2:32 PASS 27 m= 33, sd= 0



# Portage, ME - June 26, 1995 - Pass 27 - Xtk. and Alt. Errors Higher alt. and port are greater than zero



	Mean	St. Dev.
ALT.	167.49	1.14
XTK.	-54.60	7.61

Legend	
—	P5-xt
.....	P5-alt

27 Jun 1995  
Tape: E1414

Post-line Data Sheet  
Line 2  
Mission: PORTAGE MAINE, DAY

Time: 178:02:45:32  
Pass 28  
Req.# 2

#### AIRCRAFT & CHANNEL DATA

Altitude		CH 1	CH 2	CH 3	CH 4		
Desired:	13500 ft	X-HH	L-HH	C-HH	L-VV		
Baro:	13329 ft s.d.=	2	Swath Ctr Ang:	40.0°	40.0°	40.0°	40.0°
Slt. rng:	19975 ft	Tgt Dep Ang:	40.0°	40.0°	40.0°	40.0°	40.0°
Look:	Left	St rng (ft):	11915	11915	11915	11915	11915
Depr Ang:	25.0°	Near Rng Dep:	90.0°	90.0°	90.0°	90.0°	90.0°
Des. trk:	186.0°	Far Rng Dep:	28.4°	28.4°	28.4°	28.4°	28.4°
Start Sq:	-90.0°	Atten (dB):	18.0	36.0	20.0	33.0	
End Sq:	-90.0°	RMS Video (%FS)	8.4	24.1	23.6	31.5	

#### WAYPOINTS

	Latitude	Longitude
Line up:	N 47:01.89	W 68:31.61
Start:	N 46:49.96	W 68:33.44
End:	N 46:40.02	W 68:34.96
From:	N 63:14.50	W 64:46.38
To:	N 30:07.76	W 70:33.17

Main Target: GP  
Mocomp Point:  
Lat: N 46:44.73  
Long: W 68:30.56  
Tgt Trk: 0.0 Tgt Vel: 0.0  
Alt: 660.0 ft

#### RADAR PARAMETERS - for XLC

RTP Channel: 1  
Resolution: High  
Swath width: Single  
RMS Time Constant: 2^7  
Position Reference: ON  
Atten. Tracking: OFF  
Range Gate Delta: 0.0 ft  
Azimuth Presum Rate: Presum6

Filter damping is Hi -> 10 sec  
PRF Factor is FAST (262.5 kts) -  
Ave Gndspd: Real -> 251.9 kts  
Mocomp On  
GPS Vel/Pos Reference  
Adj Gnd Scene: 5000.0 ft  
Range Tracking is OFF  
Clutterlock Reference: OFF

Ave Ref Vel -> 1.8 fps (s.d.= .9)  
Ave Fil Vel -> 2.8 fps (s.d.= .9)

#### NML XMIT PWR

X: -31.7  
L: -31.4  
C: -37.4  
P: -70.0

#### ANT BIAS

Elevation: 0.0°  
Azimuth: 0.0°  
Pitch: 0.0°

#### Tape Footage

Starting: 1712 ft (2)  
Ending: 2768 ft (2)

#### Drive no.

#### Vel Bias

X: 1035.0  
Y: -433.0  
Z: 6697.0

#### CAL Atten

X: 63.8 dB  
L: 63.8 dB  
C: 63.8 dB

#### LINE Map Time (UCT)

Start: 02:45:32  
End: 02:47:55

#### Mocomp Counters

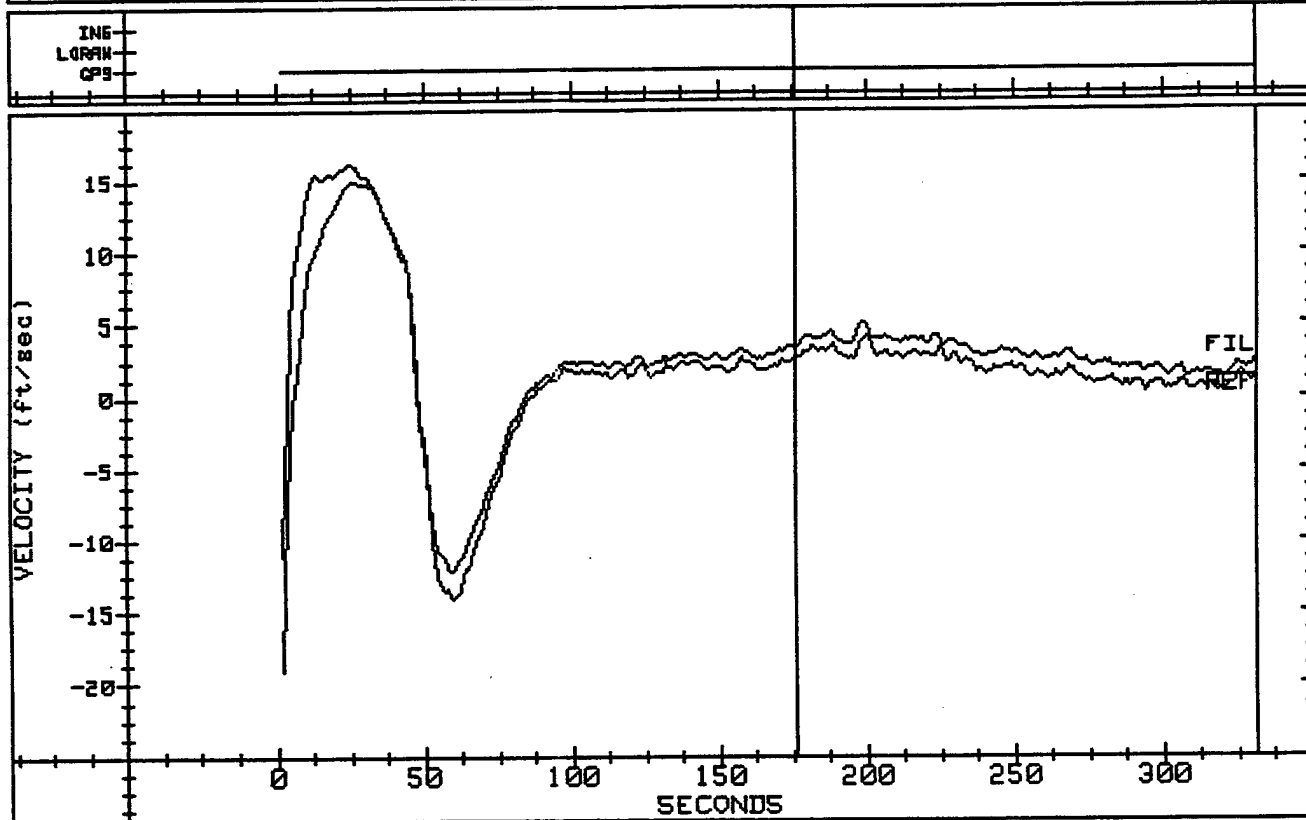
Start: 1590807 00184617h  
End: 1613787 00189FDBh

#### CPA (UCT): 00:00:00

Alt: 0 ft (GPS)  
Lat: N 0:00: 0  
Lon: E 0:00: 0

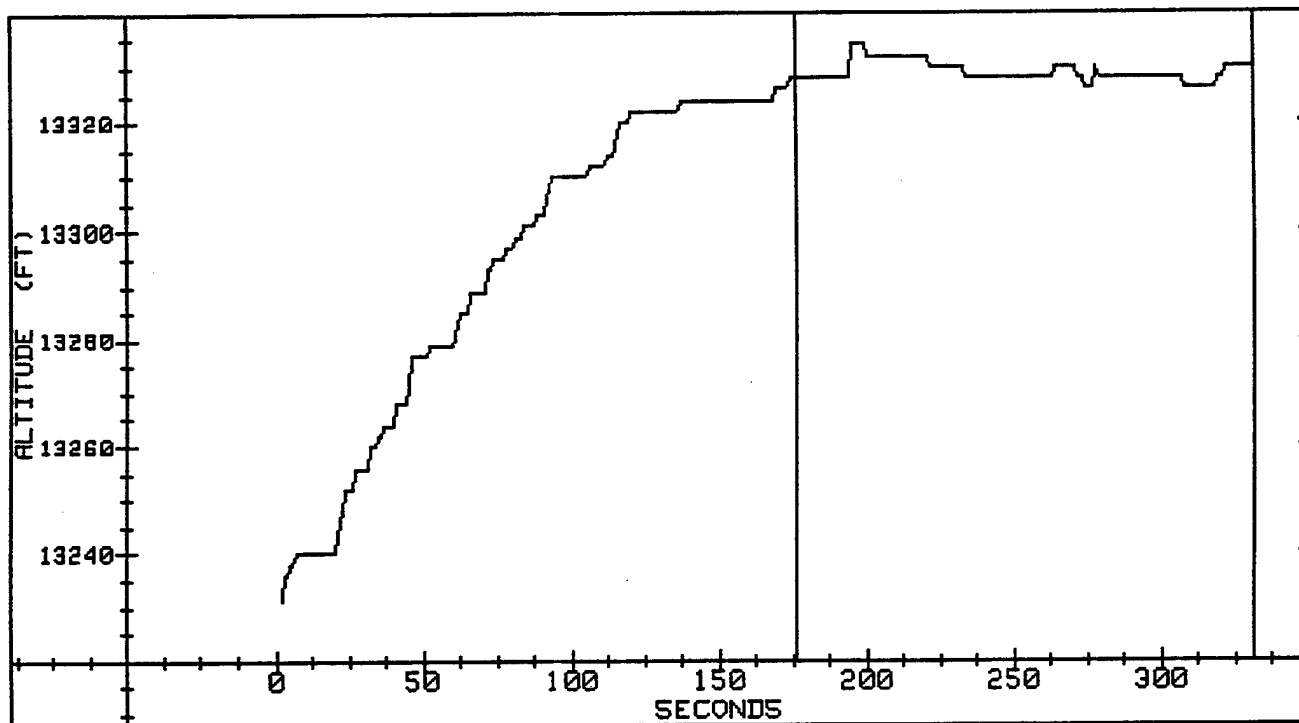


FILTERED vs. REF. VELOCITY  
DAY 170 TIME 2:42 PASS 20



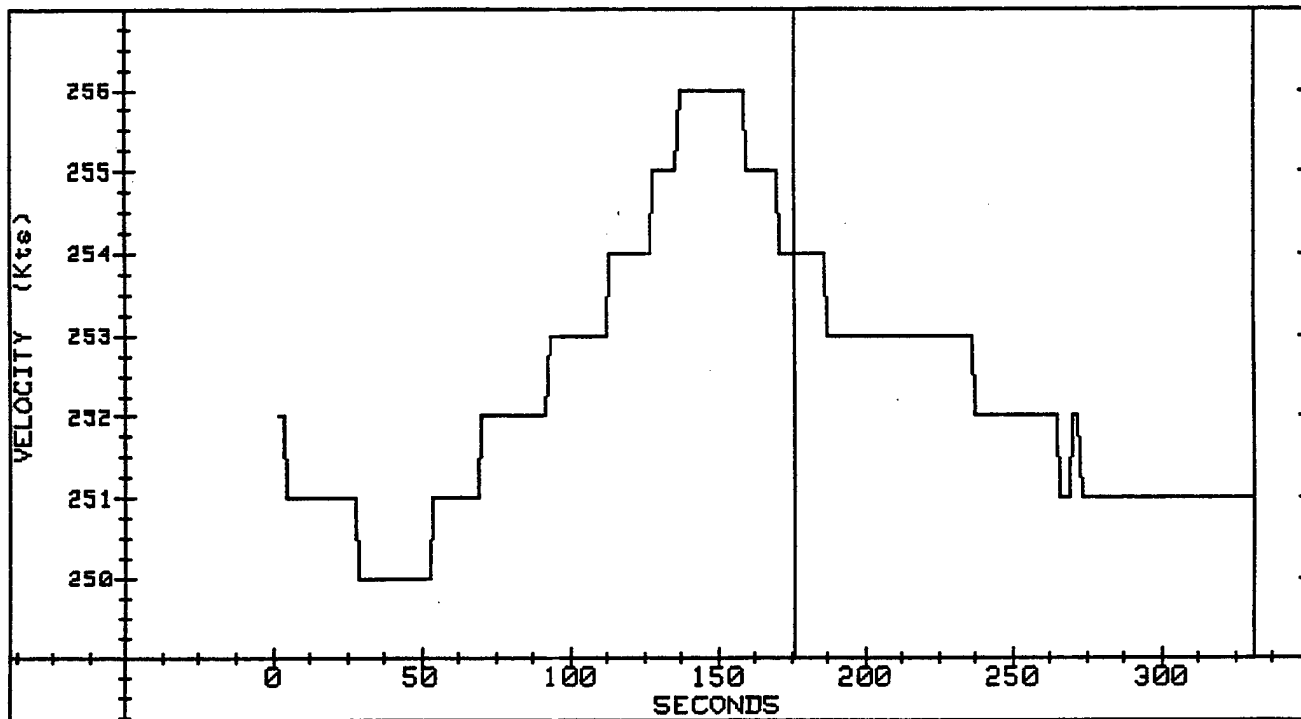
BARO ALTITUDE

DAY 178 TIME 2:42 PASS 28 m= 13330, sd= 1.97159



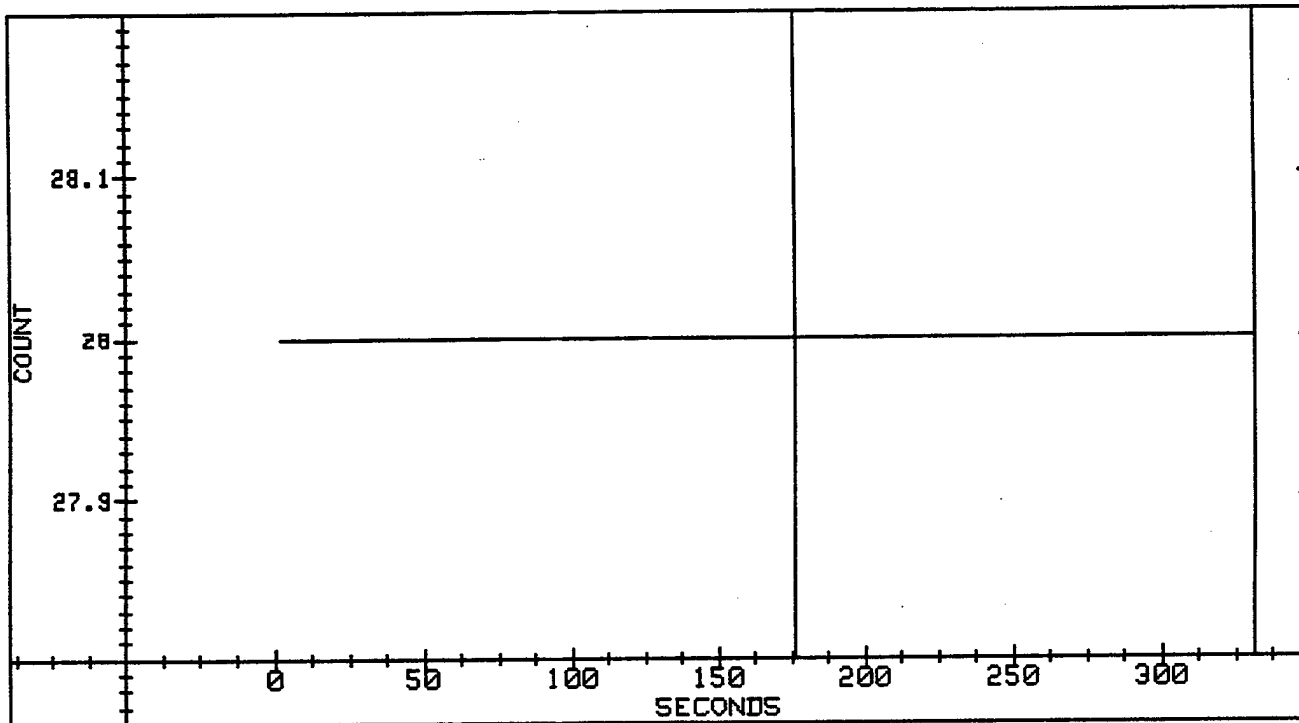
INS GROUND SPEED

DRY 178 TIME 2:42 PASS 28 m= 251.9, sd= .076542



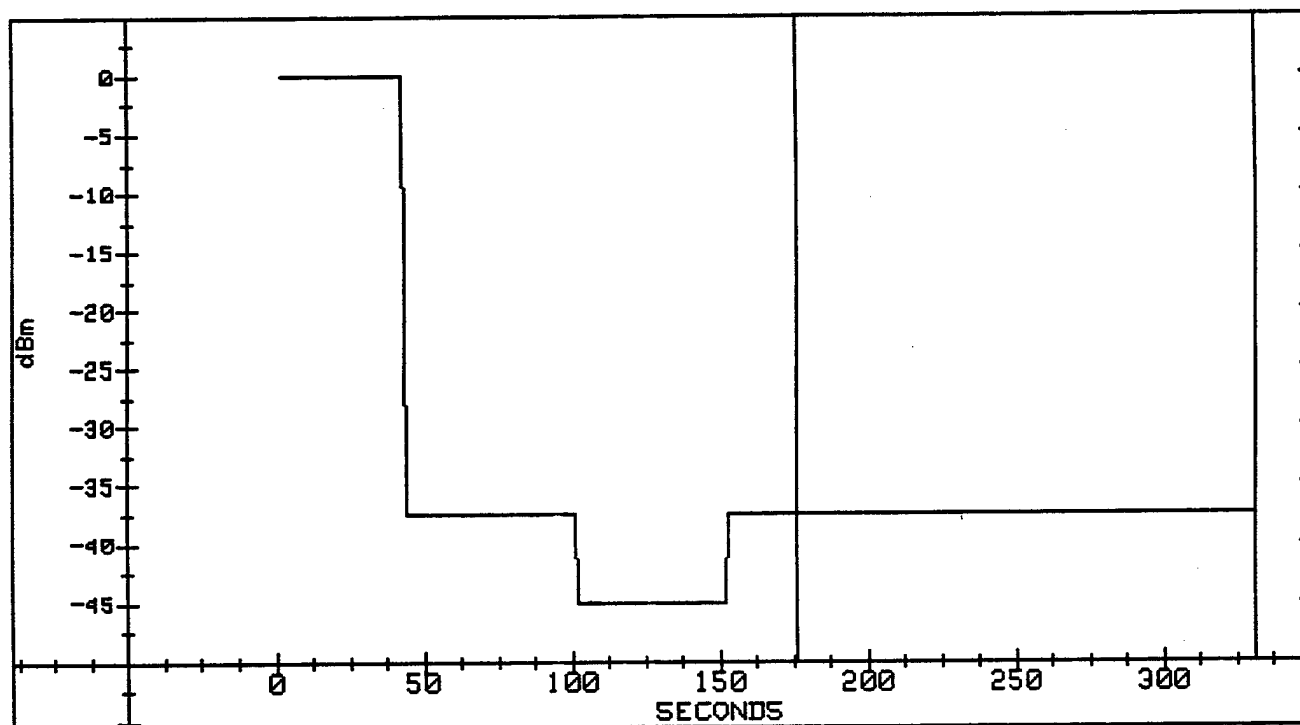
# PASS NUMBER

DAY 178 TIME 2:42 PASS 28 m= 28, sd= 0



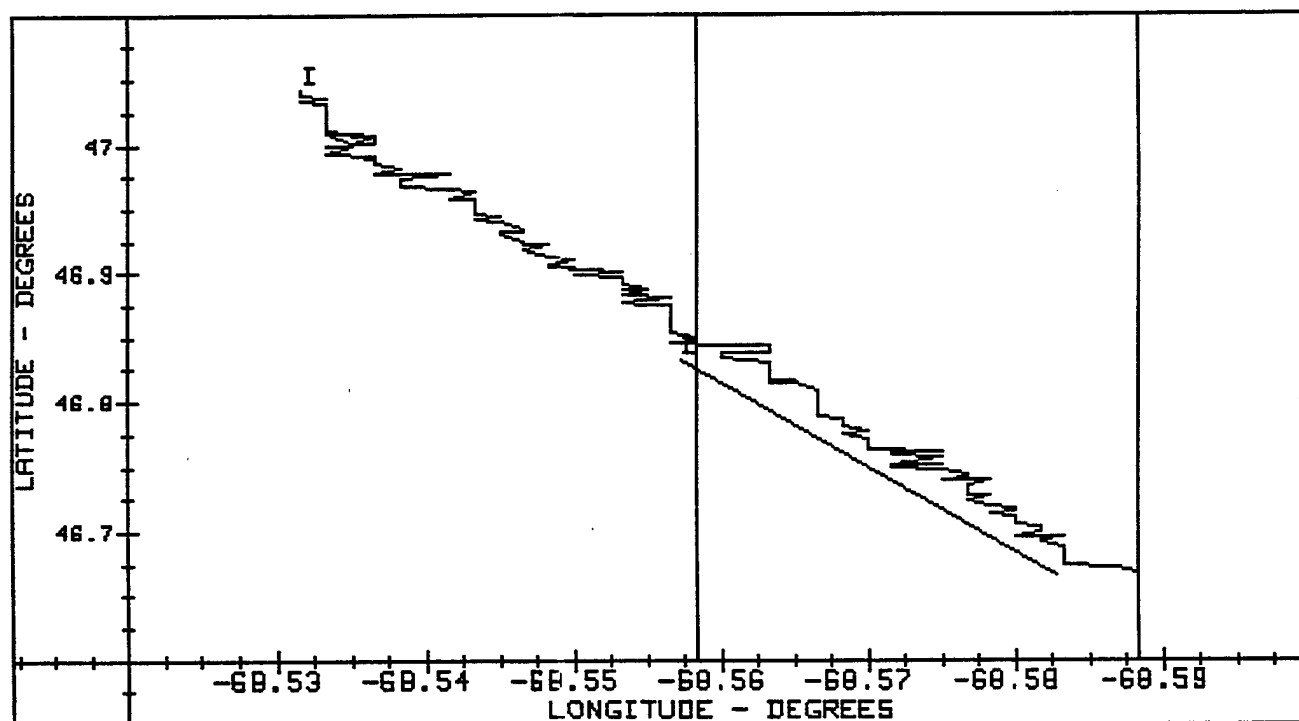
C Band Power

DAY 178 TIME 2:42 PASS 28 m= -37.55, sd= .0498261



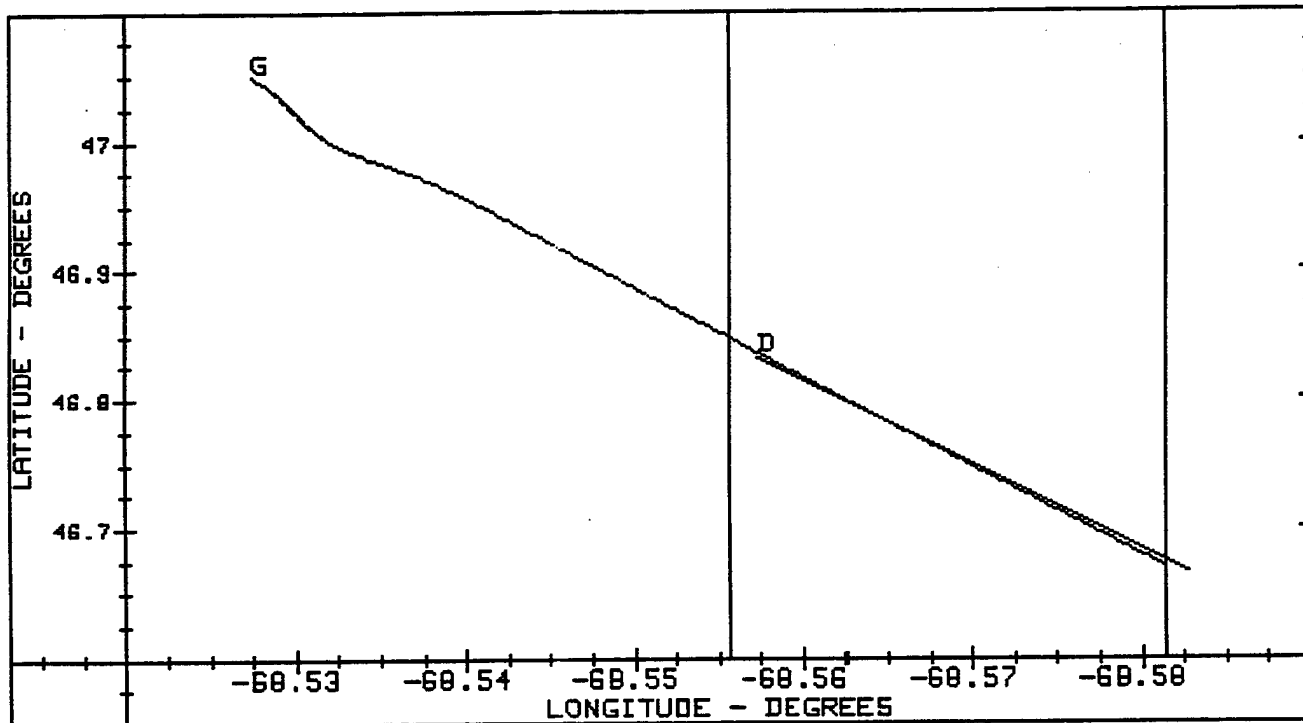
INS AIRCRAFT POSITION

DAY 178 TIME 2:42 PASS 28



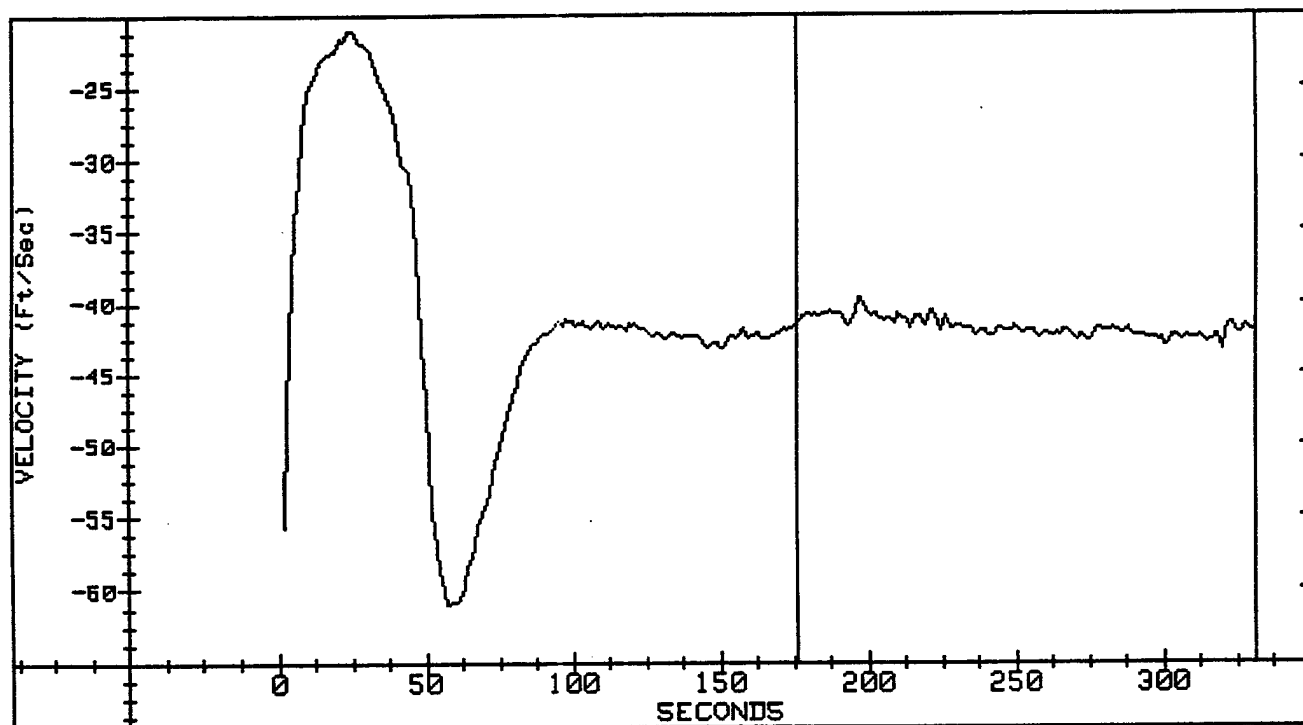
GPS AIRCRAFT POSITION

DAY 170 TIME 2:42 PASS 20



GPS V<sub>b</sub>

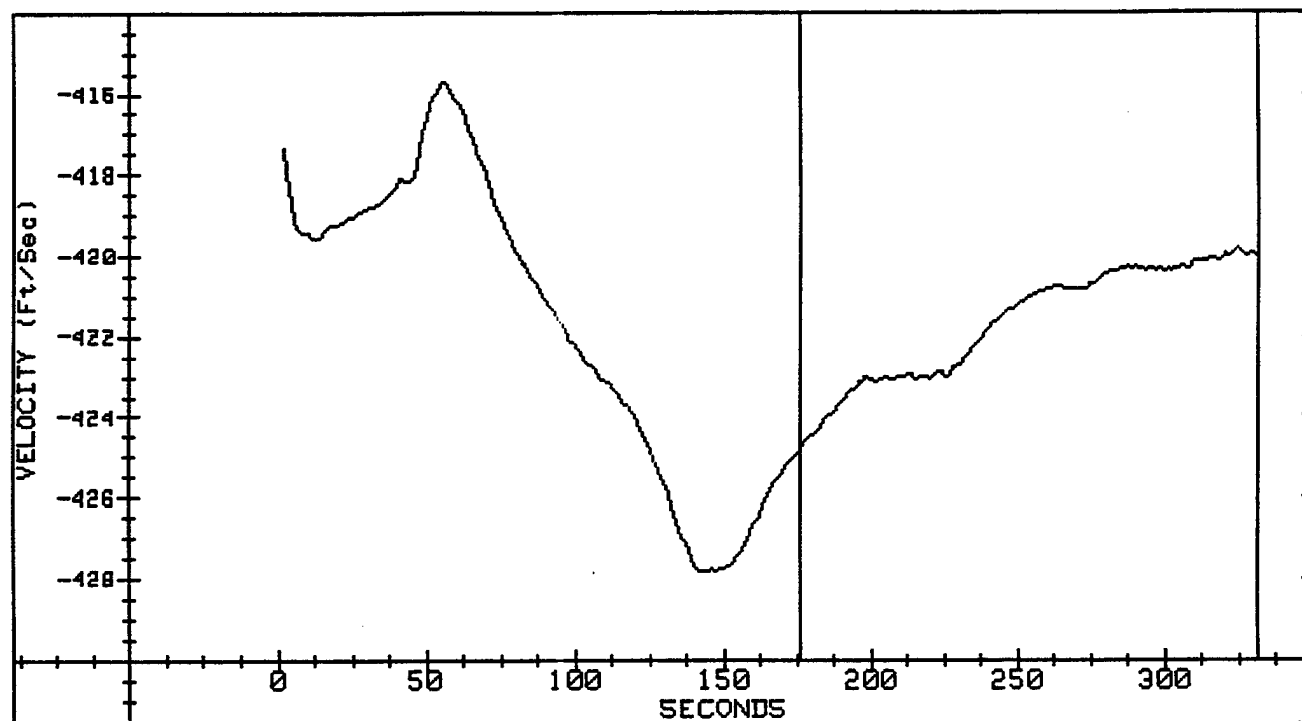
DRY 178 TIME 2:42 PASS 28 m= -41.9, sd= .661716





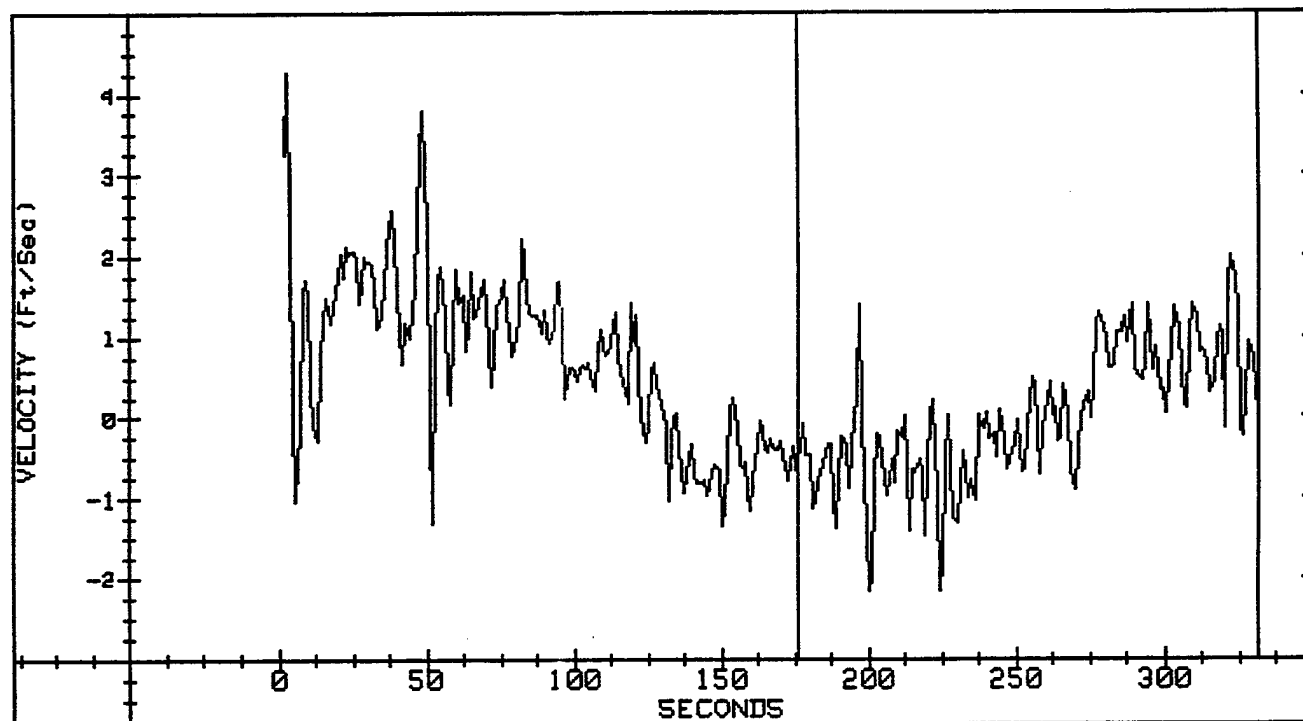
## GPS Vn

DAY 170 TIME 2:42 PASS 28 m= -421.4, sd= 1.23775



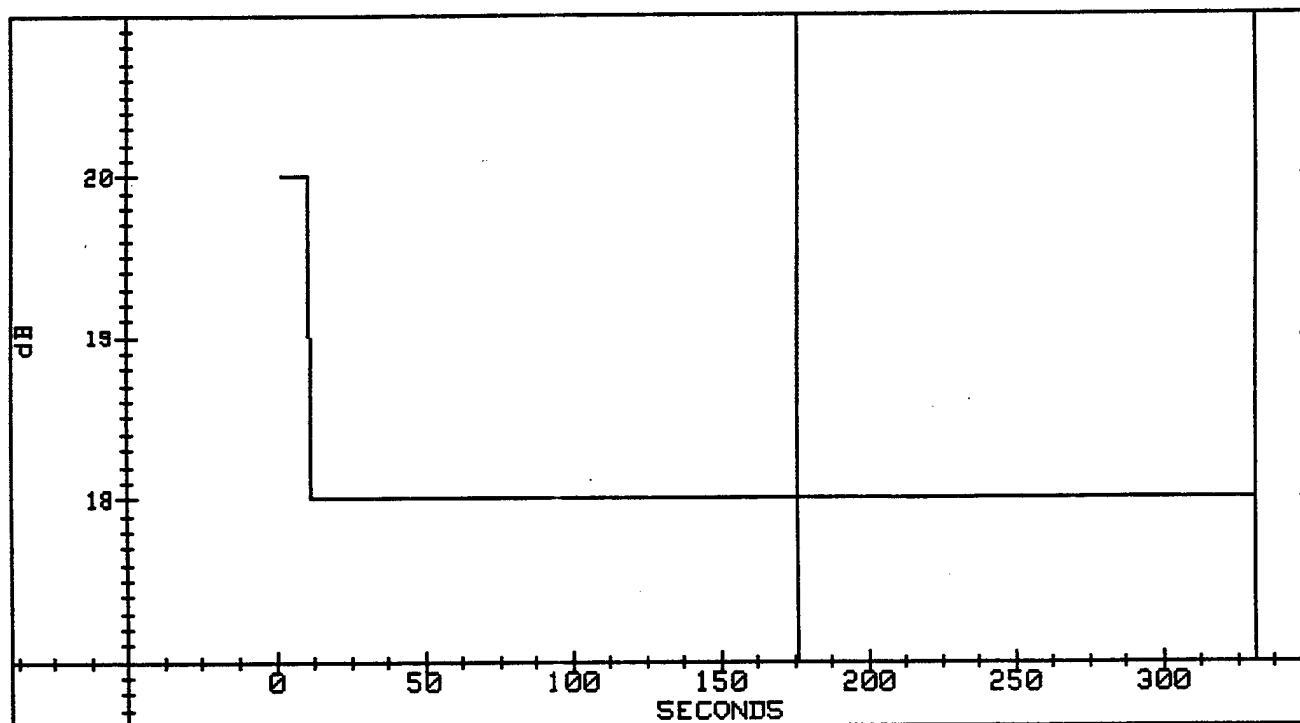
GPS Vv

DAY 178 TIME 2:42 PASS 20 m= .02648, sd= .032587



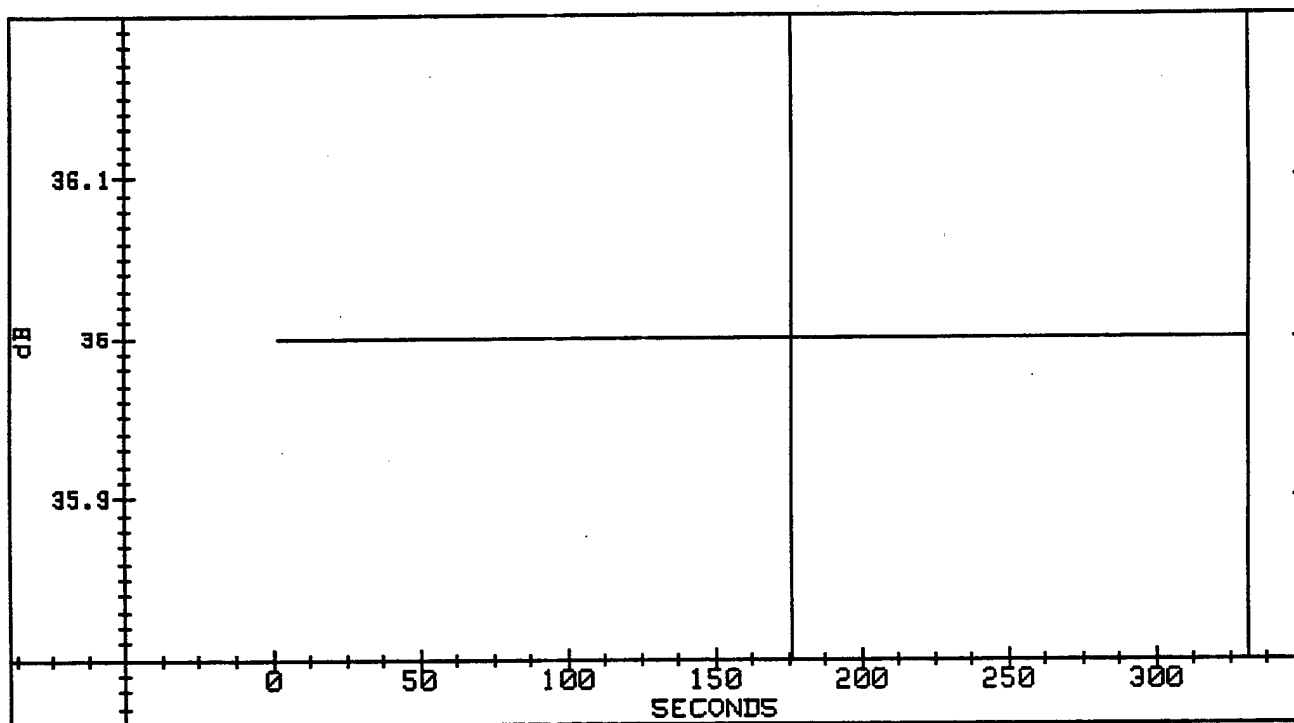
Ch1 RES Attenuation

DAY 178 TIME 2:42 PASS 28 m- 18. sd- 0



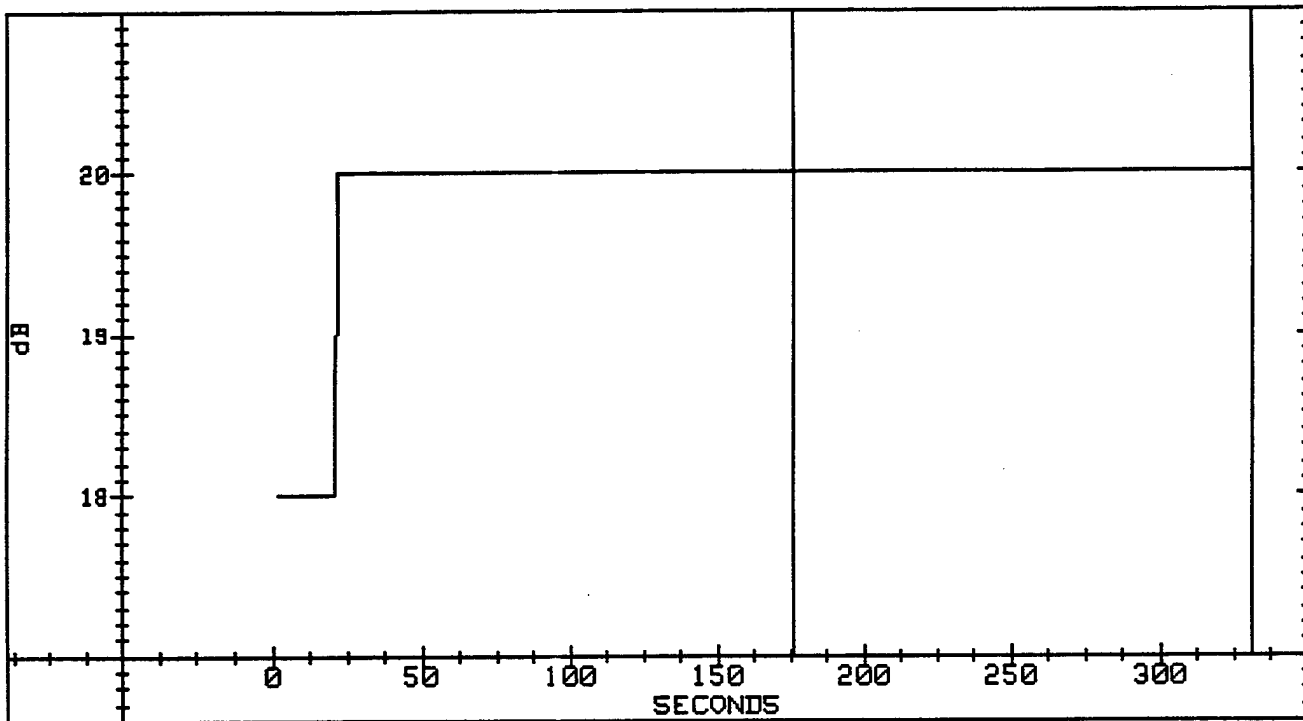
Ch2 RES Attenuation

DAY 178 TIME 2:42 PASS 28 m= 36, sd= 0



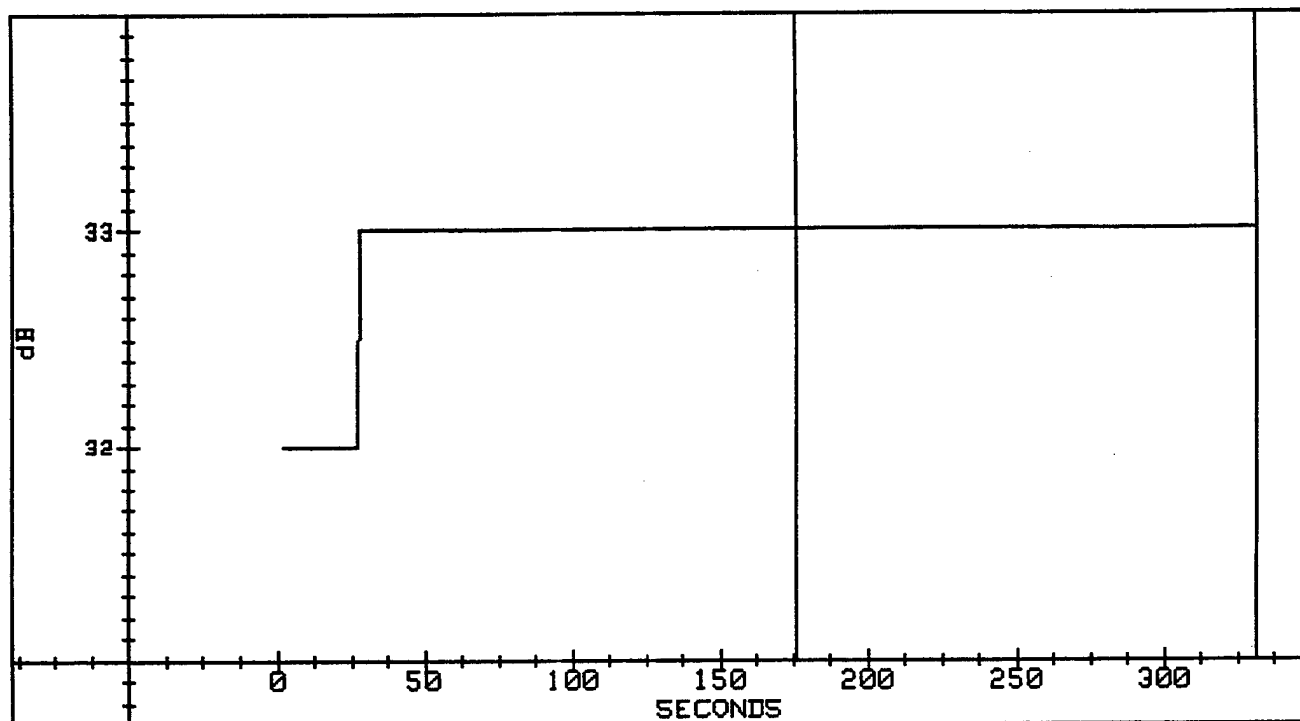
Ch3 RES Attenuation

DAY 170 TIME 2:42 PASS 20 m= 20, sd= 0



Ch4 RES Attenuation

DAY 170 TIME 2:42 PASS 20 m= 33, sd= 0



# GPS ALTITUDE

MEAN= 13555.5 STANDARD DEVIATION= 14.371

DATE: June 26, 1995 PASS 28

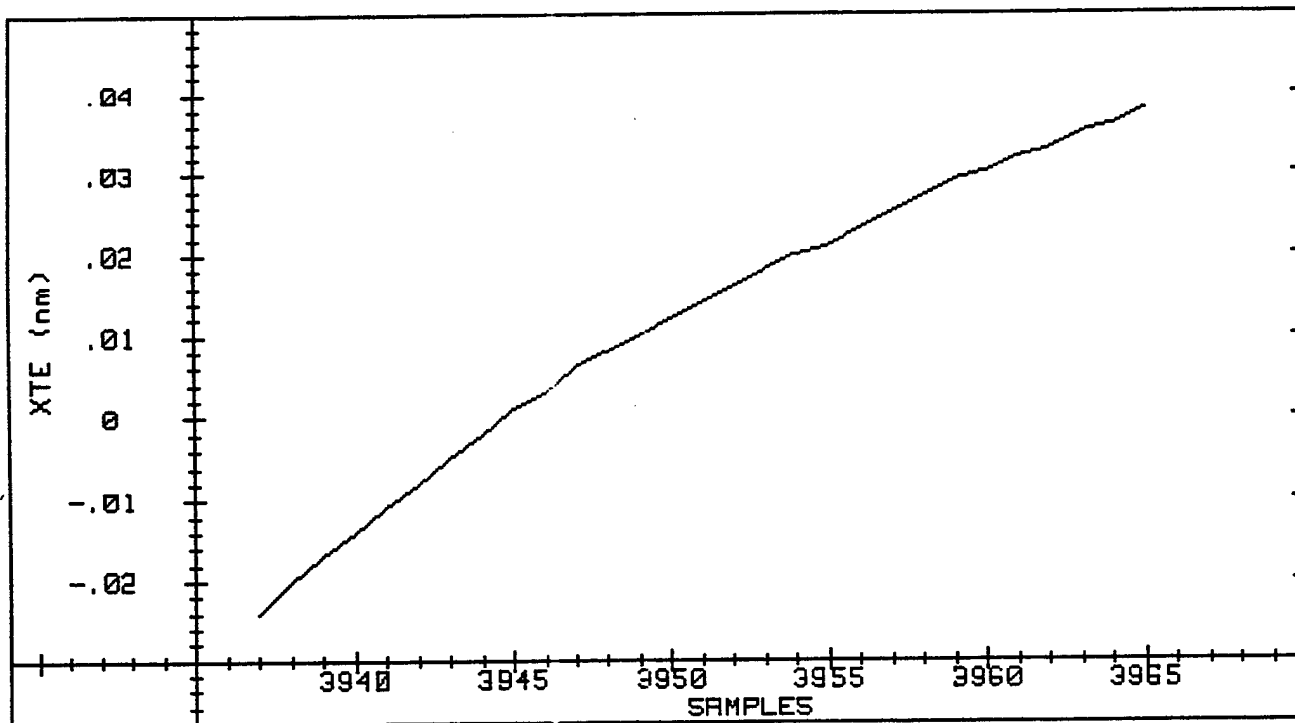
OFF  
ON  
BAR



GPS Cross Track Error

MEAN= .0115062 STANDARD DEVIATION= .0180565

DATE: June 26, 1995 PASS 28

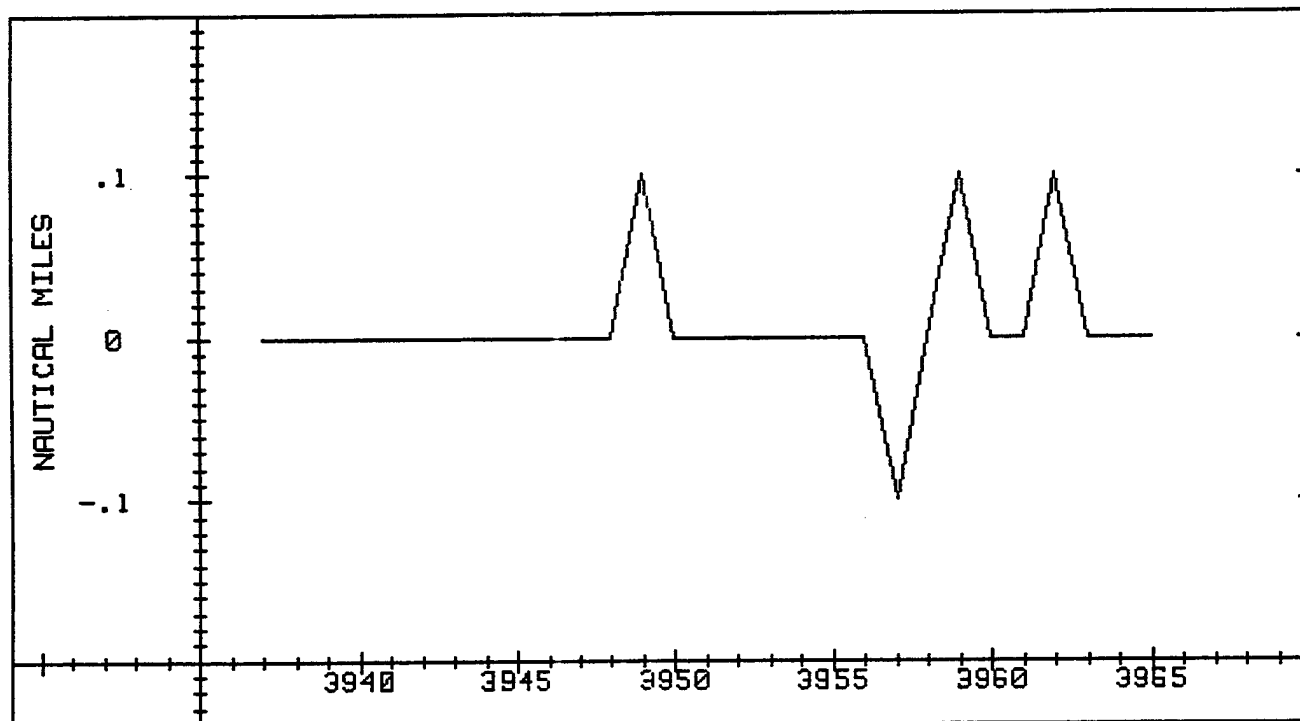




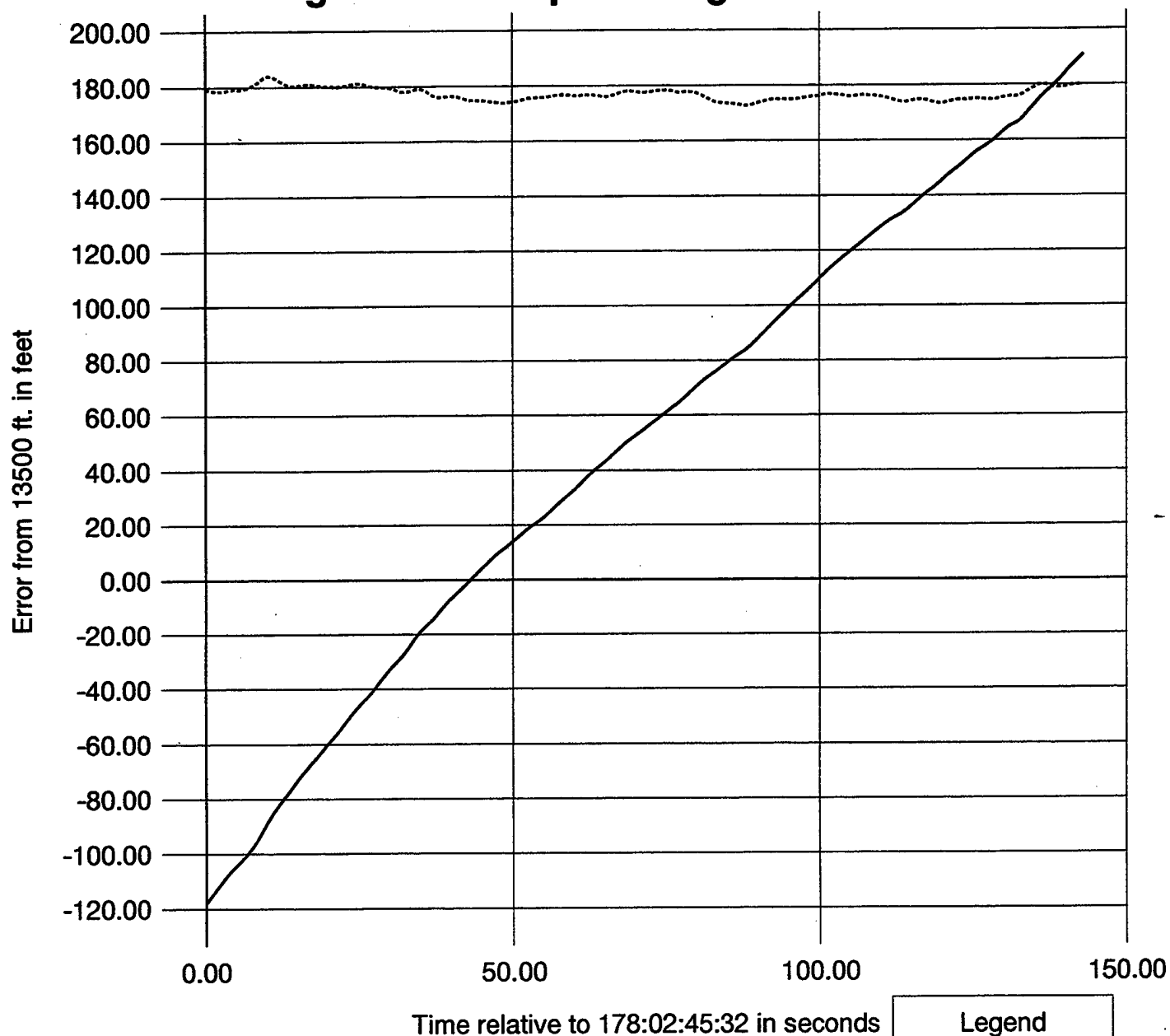
INS CROSS TRACK ERROR

MEAN= .00689655 STANDARD DEVIATION= .0364931

DATE: June 26, 1995 PASS 28



# **Portage, ME - June 26, 1995 - Pass 28 - Xtk. and Alt. Errors** **Higher alt. and port are greater than zero**



	Mean	St. Dev.
ALT.	177.00	2.44
XTK.	49.39	85.64

Legend	
—	P5-xt
.....	P5-alt